

Annual Report

OF THE MINISTER OF LANDS AND FORESTS

OF THE PROVINCE OF ONTARIO

for the fiscal year ending

MARCH 31, 1963



ONTARIO

THE DETAILED

ANNUAL REPORT

of the

Minister of Lands and Forests

of the

PROVINCE OF ONTARIO

For the Year ending March 31st, 1963



ONTARIO

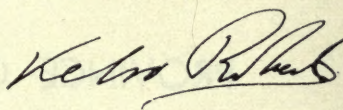
DEPARTMENT OF LANDS AND FORESTS

TO HIS HONOUR,

*The Lieutenant-Governor
of the Province of Ontario.*

MAY IT PLEASE YOUR HONOUR:

The undersigned begs respectfully to present to your Honour, the Annual Report of the Department of Lands and Forests for the fiscal year beginning April 1st, 1962, and ending March 31st, 1963.



A. KELSO ROBERTS,

Minister

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Trucks which travel winter roads are unloaded by crane at the dump on Aubinadong River in Sault Ste. Marie Forest District.



Debarked poles, the merchantable product of a management cutting in Orr Lake Forest, managed by Lands and Forests for Simcoe County.

ACCOUNTS BRANCH

DURING the year ended March 31st, 1963, cash receipts of the Department of Lands and Forests totalled \$22,573,860.35. Total cash disbursements amounted to \$28,514,067.40, representing an excess of \$5,940,270.05 in disbursements over receipts.

While total receipts of the Department have maintained the steady but nominal increase indicated in the past few years, it should be noted that revenues from the sale of park permits and hunting and fishing licences have increased at an above average rate. This increase has in part been offset by a reduction in the collection of Crown Dues due to the cutback in timber operations during the 1961-62 operating year.

Expenditures on the ordinary account have decreased from the previous year as the Department experienced a normal fire season. A substantial increase in grants to Conservation Authorities will be noted, reflecting the commencement of construction of water control projects by several Conservation Authorities.

ACCOUNTS BRANCH

Chief: R. R. MacBean

Assistant Chief: F. M. Baker

INTERNAL AUDIT
Internal Audit & Field Inspections

SYSTEMS & PROCEDURES

REVENUE ACCOUNTING
Cash Receiving, Accounts Receivable
Issue of Fish & Wildlife Licences,
Park Permits, Timber Accounts, Land Sales
Land Tax, Rentals

EXPENDITURE & GENERAL ACCOUNTING
Payrolls, Accounts Payable
Accounting Machine Operations

BUDGET ACCOUNTING
Budget Estimates & Forecasts,
Financial Reports

LAND TAX ADMINISTRATION
Assessments, Appeals, Addressograph

GENERAL
Secretarial
Department Mail Services

FINANCIAL REPORT

For Year Ended March 31st, 1963

1. Cash Receipts and Disbursements

The following shows the result of operations for the year:

Total — Cash Disbursements	\$28,514,067.40
Cash Receipts	<u>22,573,860.35</u>

Excess of Disbursements over Receipts \$5,940,207.05

2. Comparison of Receipts and Disbursements with those of the Previous Two Years

(a) Receipts Branch	Years ending March 31st		
	1961	1962	1963
	\$	\$	\$
Accounts	1,273,216.	1,281,756.	1,900,718.
Fish and Wildlife	4,848,111.	5,054,516.	5,324,796.
Forest Protection	84,823.	75,803.	84,250.
Lands and Surveys	1,004,861.	1,085,012.	1,062,874.
Parks	995,573. (1)	990,311.	1,370,563. (2)
Timber	13,449,813.	13,518,005.	12,816,859.
Conservation Authorities			13,800.
	<u>21,656,397.</u>	<u>22,005,403.</u>	<u>22,573,860.</u>

(1) Includes \$195,128.64 Federal contribution for winter work program.

(2) Includes \$218,916.40 Federal contribution under Camp Grounds and Picnic Areas agreement.

(b) Disbursements

	\$	\$	\$
Chargeable to Ordinary Account ..	23,229,038.	26,606,121.	25,579,140.
Chargeable to Capital Disbursements	48,010.	1,413,973.	2,934,927.
	<u>23,277,048.</u>	<u>28,020,094.</u>	<u>28,514,067.</u>

STATEMENT OF RECEIPTS

For Year Ending

RECEIPTS

ACCOUNTS BRANCH

Provincial Land Tax -----	\$ 1,672,927.66	
Sale of Maps, Casual Fees, etc. -----	106,760.02	
	<u>\$ 1,779,687.68</u>	
Government of Canada Repayments under Technical and Vocational Training Agreement ---	121,030.43	\$ 1,900,718.11

FISH AND WILDLIFE BRANCH

Licences, Royalties and Sundry (See Statement No. 3) -----		5,324,796.37
--	--	--------------

FOREST PROTECTION BRANCH

Forest Protection Section		
Recovery of Fire Fighting Costs and Miscellaneous -----	59,717.73	
Air Service Section		
Flying Fees -----	24,532.33	84,250.06

LANDS AND SURVEYS BRANCH

Lands Section		
Land Sales (Capital) -----	\$ 627,053.97	
Land Rentals		
Leases and Licences of Occupation -----	375,111.39	
Miscellaneous -----	25,390.59	
Park Rentals		
Leases and Licences of Occupation		
Algonquin -----	\$ 14,431.86	
Rondeau -----	17,165.74	
Presqu'île -----	2,410.76	
Long Point -----	1,131.76	
Other Parks -----	177.60	
	<u>35,317.72</u>	1,062,873.67

PARKS BRANCH

Park Concessions		
Rentals -----	\$ 71,646.31	
Permits (All Parks)		
Vehicle -----	\$507,656.50	
Campsite -----	537,997.00	
Boat -----	9,655.00	
Guide -----	4,344.00	
	<u>1,059,652.50</u>	
Miscellaneous -----	20,348.14	
	<u>\$ 1,151,646.95</u>	
Government of Canada Repayments under Camp Grounds and Picnic Areas Agreement -----	218,916.40	1,370,563.35
Carried forward		<u>\$ 9,743,201.56</u>

AND DISBURSEMENTS

March 31st, 1963

DISBURSEMENTS

MAIN OFFICE

Minister's Salary — Statutory -----		\$	12,000.00	
Salaries -----	\$2,272,679.45			
Travelling Expenses -----	82,818.20			
Maintenance and Operating -----	41,307.73		2,396,805.38	
Damages and Other Claims, Sundry Contingencies, etc. -----			1,970.99	
Workmen's Compensation -----			161,887.06	
Unemployment Insurance -----			64,404.13	
Annuities and Bonuses to Indians -----			33,172.00	
Advisory Committee to the Minister -----			4,595.43	
River Valley Conservation Surveys -----			122,790.65	\$ 2,797,625.64

FIELD SERVICES

BASIC ORGANIZATION — District Offices

Salaries -----	\$13,693,246.70			
Travelling Expenses -----	622,230.54			
Maintenance and Operating -----	3,789,266.93			
Equipment — other than Forest Fire Suppression -----	791,307.67		\$18,896,051.84	
Less: Federal Contribution -----			1,080,845.30	17,815,206.54

EXTRA FIRE FIGHTING

Wages, etc., Maintenance and Operating -----	\$	529,784.81	
Forest Fire Suppression Equipment -----		170,285.17	700,069.98

AIR SERVICE SECTION

Salaries -----	\$	604,928.73	
Travelling Expenses -----		11,992.85	
Maintenance and Operating -----		479,748.16	1,096,669.74

LANDS AND SURVEYS

Ground Surveys -----		278,144.72	
Lake-of-the-Woods and Lac Seul Storage Dams— Control and Maintenance -----		1,518.34	279,663.06

PUBLIC INFORMATION AND EDUCATION

Salaries, etc., Maintenance and Operating -----		196,733.14	
Carried forward			\$22,885,968.10

RECEIPTS

For Year Ended March 31st, 1963

Brought Forward

\$ 9,743,201.56

TIMBER BRANCH

Timber Section

Timber Dues, Bonus, etc. (See Statement No. 2) -----	\$12,623,877.22		
Cash Deposits — Excess of Refunds over Deposits -----	7,969.46		
	<u>\$12,615,907.76</u>		
Government of Canada Repayments under Forest Inventory Agreement -----	1,492.10	\$12,617,399.86	
Logging Roads — Recovery of Costs (Capital) -----		94,297.80	
		<u>\$12,711,697.66</u>	

Reforestation Section

Sale of Nursery Trees -----	\$ 103,849.18		
Government of Canada Repayments under Forest Inventory Agreement -----	1,312.35	105,161.53	12,816,859.19

CONSERVATION AUTHORITIES BRANCH

Government of Canada — Repayments under Flood Control Agreements -----	13,799.60
--	-----------

TOTAL RECEIPTS ----- \$22,573,860.35

Excess of Disbursements over Receipts ----- 5,940,207.05

\$28,514,067.40

DISBURSEMENTS

For Year Ended March 31st, 1963

Brought Forward

\$22,885,968.10

GRANTS

Association of Ontario Land Surveyors -----	\$	200.00	
Ontario Forestry Association -----		10,000.00	
Grants to Municipalities under The Forestry Act (See Statement No. 6) -----		139,728.89	
Grants to Conservation Authorities (See State- ment No. 8) -----		417,960.05	
Grants to Municipalities under The Parks Assistance Act (See Statement No. 7) -----		107,712.41	
Ontario Research Foundation -----		50,000.00	
Jack Miner Migratory Bird Foundation, Inc. ---		3,000.00	
Thomas N. Jones -----		300.00	
Ontario Fur Breeders' Association, Inc. -----		5,000.00	
Ontario Council of Commercial Fisheries -----		2,500.00	
Ontario Trappers' Association -----		5,000.00	
Niagara Parks Commission -----		30,000.00	771,401.35

WOLF BOUNTY ----- 44,664.00

PARKS IMPROVEMENTS

Acquisition of Land -----	\$	482,692.71	
Land Improvements, Sundry Buildings and Structures -----		1,111,939.00	
Construction of Major Buildings -----		74,088.19	
Picnic Tables, Grills, Refuse Containers and other Equipment -----		159,843.42	
	\$	1,828,563.32	
Less: Federal Contribution -----		197,975.29	1,630,588.03

MAINTENANCE OF ACCESS ROADS

Salaries, etc., Maintenance and Operating ----- 246,518.23

LOGGING ROADS (CAPITAL)

Construction Costs (Recovered — See Receipts) ----- 94,297.80

GRANTS TO CONSERVATION
AUTHORITIES (CAPITAL) —

(See Statement No. 8) -----	\$	3,979,389.83	
Less: Federal Contributions under Flood Control Agreements -----		1,138,759.94	2,840,629.89

TOTAL DISBURSEMENTS ----- \$28,514,067.40

TIMBER
TIMBER
ANALYSIS OF CASH
For Year Ending

Districts	Crown Dues	Ground Rent	Forest Protection Charges	Interest, Scalers' Wages, Mill Licenses, Etc.
Chapleau -----	\$ 448,382.74	\$ 1,003.00	\$ 12,838.40	\$ 1,282.66
Cochrane -----	1,179,999.27	7,175.00	91,840.00	3,064.55
Fort Frances -----	365,468.30	852.00	10,905.60	217.69
Geraldton -----	1,451,340.90	13,584.00	173,868.62	10,245.28
Gogama -----	342,528.44	1,927.00	24,665.60	34.88
Kapuskasing -----	1,546,242.77	7,372.00	94,554.80	518.48
Kenora -----	945,624.26	10,425.00	133,440.00	332.32
Lindsay -----	94,892.79	202.00	2,585.80	183.00
North Bay -----	461,949.25	3,412.00	43,673.60	2,541.24
Parry Sound -----	209,392.03	1,219.00	15,603.20	753.46
Pembroke -----	549,266.36	5,761.00	74,611.87	249.67
Port Arthur -----	1,025,834.15	12,907.00	165,209.60	348.89
Sault Ste. Marie --	613,636.42	3,812.00	49,045.74	112.65
Sioux Lookout ----	677,000.85	1,592.00	20,377.60	372.42
Sudbury -----	302,373.85	4,444.00	58,279.72	1,334.26
Swastika -----	495,918.79	1,907.00	25,209.80	1,127.13
Tweed -----	194,990.60	488.00	6,316.50	506.83
White River -----	477,859.59	5,820.00	76,031.20	568.12
Other Districts ----	35,464.54	1.00	17,581.14	1,376.00
Federal Forestry Agreement				
	\$11,418,165.90	\$83,903.00	\$1,096,638.79	\$25,169.53
Percentage of Total Timber Revenue -	90.45	.66	8.69	.20

BRANCH

SECTION

RECEIPTS BY DISTRICTS

March 31st, 1963

Total Timber Revenue	Percentages of Total Timber Revenue	Cash Deposits Received & Refunded	Federal Forestry Agreement	Total Timber Revenue & Cash Deposits
\$ 463,506.80	3.67			\$ 463,506.80
1,282,078.82	10.16	\$10,589.41		1,292,668.23
377,443.59	2.99	2,600.00 (Cr.)		374,843.59
1,649,038.80	13.06	4,161.07 (Cr.)		1,644,877.73
369,155.92	2.93	3,000.00		372,155.92
1,648,688.05	13.06	8,000.00 (Cr.)		1,640,688.05
1,089,821.58	8.63	2,546.31 (Cr.)		1,087,275.27
97,863.59	.78	8,185.84 (Cr.)		89,677.75
511,576.09	4.05	2,350.00		513,926.09
226,967.69	1.80	1,063.14		228,030.83
629,888.90	4.99	2,111.95		632,000.85
1,204,299.64	9.54	1,514.67		1,205,814.31
666,606.81	5.28	40.01 (Cr.)		666,566.80
699,342.87	5.54	8,334.83 (Cr.)		691,008.04
366,431.83	2.90	8,580.57 (Cr.)		357,851.26
524,162.72	4.15			524,162.72
202,301.93	1.60	10,150.00		212,451.93
560,278.91	4.44	3,700.00		563,978.91
54,422.68	.43			54,422.68
			\$1,492.10	1,492.10
\$12,623,877.22	100%	\$ 7,969.46 (Cr.)	\$1,492.10	\$12,617,399.86

100.00%

FISH AND WILDLIFE BRANCH

Analysis of Cash Receipts

For Year Ended March 31st, 1963

FISHERIES

Licences

Angling	\$2,608,571.61	
Commercial Fishing	93,612.00	
Smelt	18,144.10	
	<hr/>	
	\$2,720,327.71	

Royalty

Commercial Fishing	2,705.00	\$2,723,032.71
	<hr/>	

GAME

Licences

Non-Resident Hunting	\$1,041,489.70	
Bear	1,536.00	
Deer	478,443.69	
Moose	363,094.80	
Ground Hog	28,198.78	
Gun	301,142.56	
Dog	22,186.90	
Trappers	33,031.00	
Fur Dealers	3,488.00	
Fur Farmers	5,285.00	
Pheasant	6,200.00	
Tanners	105.00	
Cold Storage	219.00	
	<hr/>	
	\$2,284,420.43	

Royalty

Game	222,233.80	2,506,654.23
	<hr/>	

GENERAL

Licences

Guides	9,724.00	
Wild Rice	14.00	
Hunt Camp Permits	1,460.00	
Fines	47,389.23	
Costs Collected	936.50	
Sales — Confiscated Articles	18,183.02	
— General	886.29	
Pheasant Tags	1,665.90	
Miscellaneous	14,850.49	95,109.43
	<hr/>	
		<u>\$5,324,796.37</u>

RESEARCH BRANCH

Statement of Expenditure

For Year Ended March 31st, 1963

PROGRAMS

Forestry -----	\$328,609.97
Fisheries -----	303,588.86
Mechanical -----	34,144.99
Physical -----	24,850.66
Statistical and Mensuration -----	25,822.85
Wildlife -----	135,752.91
Branch Administration -----	73,088.17
Maintenance Costs — Maple Station -----	61,799.91
	<u>\$987,658.32</u>

TOTAL EXPENDITURE ALLOCATED

For Year Ended

	Total \$	Forest Protection \$	Lands \$	Timber \$
Ordinary Expenditure				
Main Office -----	2,797,626.	448,423.	192,015.	550,535.
Surveys -----	279,663.			
Basic Organization (before deducting Federal Contributions, \$1,080,845.) --	18,896,052.	5,054,428.	516,524.	5,664,299.
Extra Fire Fighting -----	700,070.	700,070.		
Public Information and Education ----	196,733.	46,890.	3,825.	39,056.
Air Service -----	1,096,670.			
Grants -----	741,401.			189,729.
Wolf Bounties -----	44,664.			
Parks Improvements (before deducting Federal Contributions, \$197,975.) ----	1,828,563.			
Maintenance of Access Roads -----	246,518.	27,297.	11,205.	179,125.
Grants — Niagara Parks Commission --	30,000.			
	26,857,960.	6,277,108.	723,569.	6,622,744.

Distribution of General Expenditure and Administration Costs Over Main Services

Air Service (as per analysis) -----	648,025.	28,180.	154,330.
Field Administration (pro-rated) -----	562,620.	60,143.	529,639.
— Percentage -----	29.0%	3.1%	27.3%
Research (as per analysis) -----	56,498.	13,132.	408,623.
Surveys (pro rated) -----	7,359.	537,213.	125,104.
— Percentage -----	1.0%	73.0%	17.0%
	26,857,960.	7,551,610.	1,362,237.
			7,840,440.

Less: Federal Contributions applied as Credits

Forestry Agreement			
— Forest Inventory (as per costs) ----	200,000.	50,000.	30,000.
— Planting -----	500,000.		500,000.
— Fire Fighting Equipment -----	290,018.	290,018.	
— Forest Access Roads -----	12,644.		12,644.
Resources Development Agreement ----	78,183.		
Campgrounds — Picnic Areas Agreement	197,975.		

TOTAL ORDINARY

EXPENDITURE ----- 25,579,140. 7,211,592. 1,332,237. 7,247,796.

Capital Disbursements

Construction of Logging Roads -----	94,297.			94,297.
Grants to Conservation Authorities ---	2,840,630.			

TOTAL DISBURSEMENTS ----- 28,514,067. 7,211,592. 1,332,237. 7,342,093.
 Percentage of Total ----- 25.3% 4.7% 25.7%

TO MAIN SERVICES RENDERED

31st March, 1963

Fish and Wildlife \$	Parks \$	Conservation Authorities \$	Air Service \$	Research \$	Surveys \$	Field Administration \$
376,684.	292,907.	449,736.	70,620.	55,415.	361,291. 279,663.	
2,790,510.	1,741,095.	10,984.	161,992.	987,658.	38,492.	1,930,070.
81,193.	23,296.	2,473.	1,096,670.			
15,800. 44,664.	107,712.	417,960.			200.	10,000.
1,990.	1,828,563. 26,901. 30,000.					
3,310,841.	4,050,474.	881,153.	1,329,282.	1,043,073.	679,646.	1,940,070.

451,823.	46,924.		*1,329,282.		
302,651.	304,591.	38,801.		85,363.	56,262.
15.6%	15.7%	2%		4.4%	*1,940,070.
639,223.	10,960.			*1,128,436.	
7,359.	58,873.				*735,908.
1.0%	8.0%				
4,711,897.	4,471,822.	919,954.			

40,000.	
78,183.	197,975.

4,593,714. 4,273,847. 919,954.

2,840,630.

4,593,714.	4,273,847.	3,760,584.
16.1%	15.0%	13.2%

*Deductions

Statement No. 6

Grants to Municipalities and Conservation
Authorities Under the Forestry Act, R.S.O. 1960
(To aid in the acquisition of Forest Areas)

MUNICIPALITIES:

Counties:

Grey -----	\$ 4,548.30	
Lanark -----	2,695.30	
Leeds and Grenville -----	1,525.15	
Lennox and Addington -----	1,155.65	
Middlesex -----	6,928.60	
Renfrew -----	9,049.45	
Simcoe -----	25,583.12	
Stormont, Dundas and Glengarry -----	3,412.27	
Williamsburg -----	1,716.02	
York -----	5,609.30	\$62,223.16

CONSERVATION AUTHORITIES:

Ausable River -----	\$ 3,305.40		
Big Creek Region -----	4,346.82		
Catfish Creek -----	2,132.00		
Ganaraska River -----	8,564.35		
Grand Valley -----	5,389.95		
Moirs River -----	6,735.29		
Napanee Valley -----	690.85		
Neebing Valley -----	409.25		
North Grey Region -----	16,326.95		
Otter Creek -----	22,169.27		
Saugeen Valley -----	6,583.89		
Spencer Creek -----	180.89		
Upper Thames River -----	670.82	77,505.73	\$139,728.89

Statement No. 7

Grants to Municipalities for Municipal Camping Areas
Under the Parks Assistance Act, R.S.O. 1960

Municipal Camping Areas:

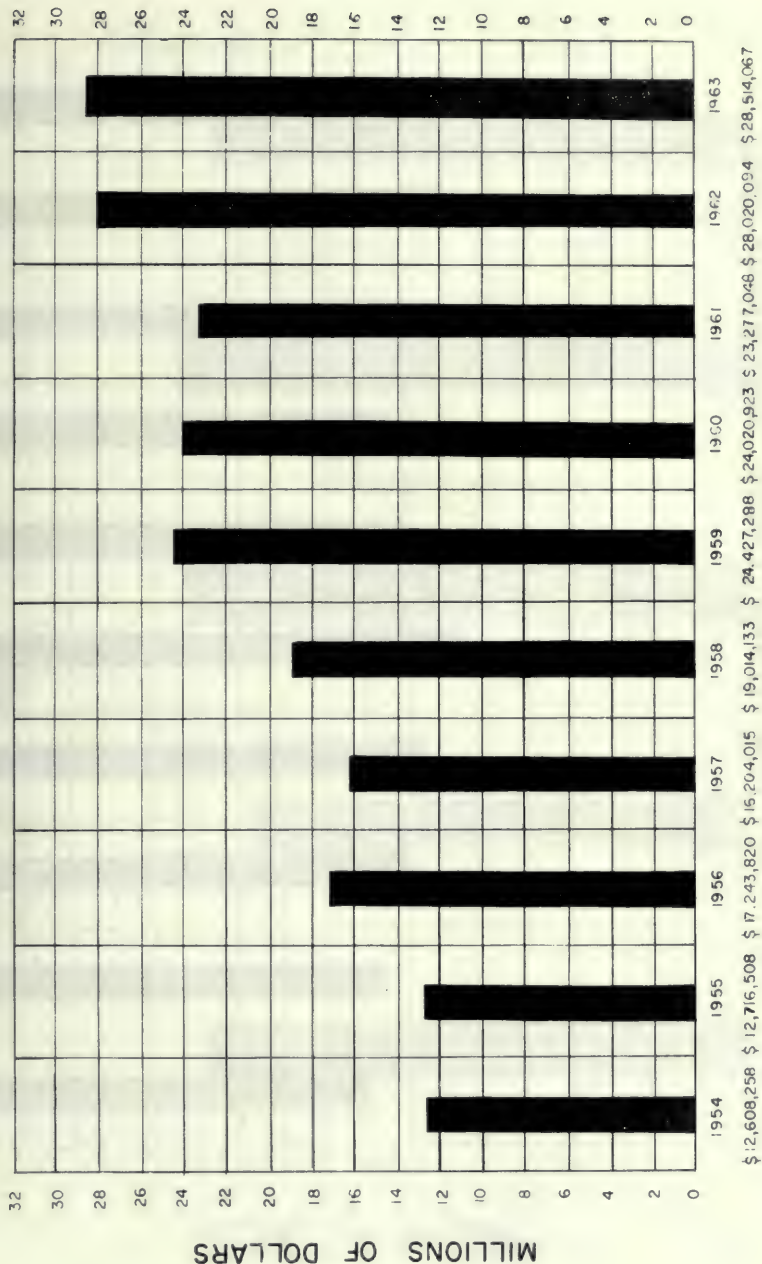
Town of Cochrane -----	\$ 1,501.60
City of Fort William -----	4,950.98
Town of Huntsville -----	2,975.00
Township of Innisfil -----	13,090.92
Town of Kenora -----	8,323.15
Town of Listowel -----	4,000.00
Town of Orillia -----	8,660.77
Township of Orillia -----	6,352.19
City of Peterborough -----	18,075.67
City of Sarnia and Township of Sarnia -----	3,799.53
City of Sudbury -----	30,364.50
Town of Thessalon -----	1,691.68
Town of Wingham -----	3,926.42
	<u>\$107,712.41</u>

Grants to Conservation Authorities
Under the Conservation Authorities Act, R.S.O. 1960
as amended 1961-62

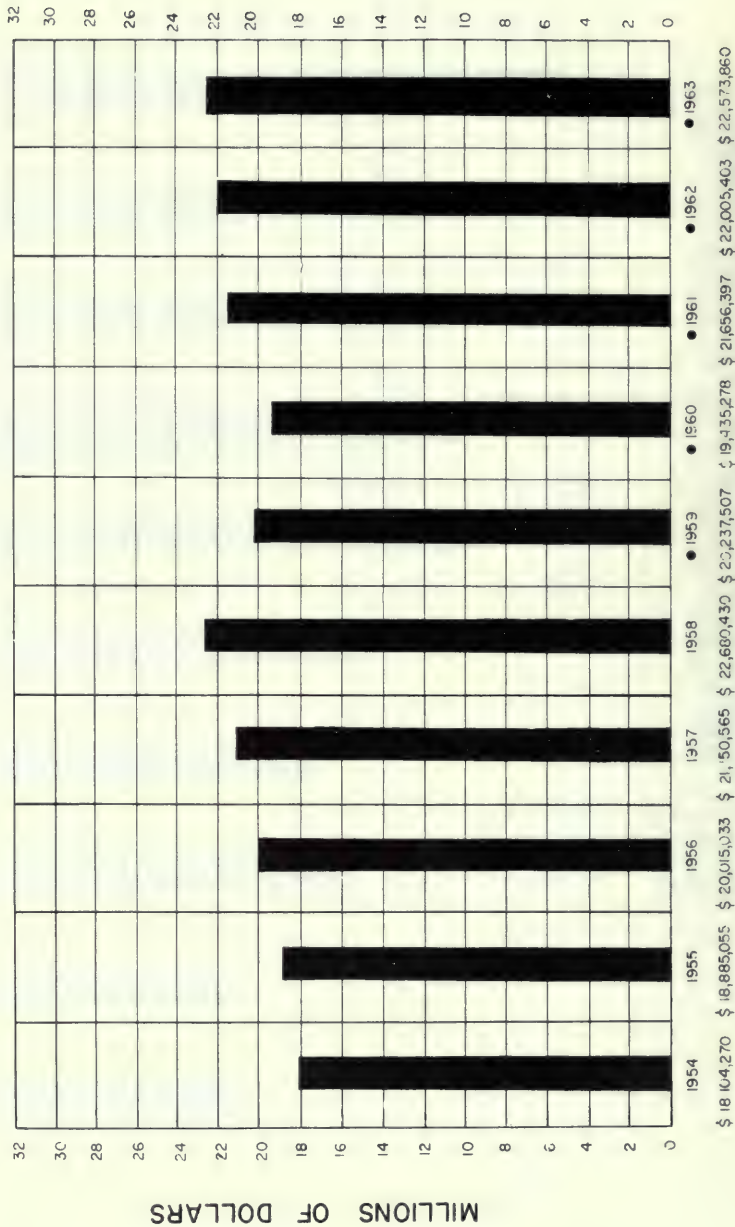
Conservation Authorities

	Administration	Development	Total
Ausable River -----	\$ 14,528.35	\$ 3,882.58	\$ 18,410.93
Big Creek Region -----	9,317.54	10,391.90	19,709.44
Catfish Creek -----	771.10		771.10
Central Lake Ontario -----	1,643.09		1,643.09
Credit Valley -----	19,479.83	33,769.91	53,249.74
Crowe Valley -----	1,299.92	183.97	1,483.89
Ganaraska River -----	2,525.93	516.48	3,042.41
Grand Valley -----	35,989.77	46,197.11	82,186.88
Holland Valley -----	2,197.87	20,096.05	22,293.92
Junction Creek -----	1,579.77	36,529.77	38,109.54
Lower Thames Valley -----	5,691.03	947.79	6,638.82
Maitland Valley -----	3,500.00	785.60	4,285.60
Mattagami Valley -----	630.41		630.41
Metropolitan Toronto and Region	195,022.67	3,129,955.28	3,324,977.95
Moira River -----	6,639.56	4,206.42	10,845.98
Napanee Valley -----	1,122.26	510.81	1,633.07
Neebing Valley -----	877.41		877.41
Niagara Peninsula -----	17,711.88	30,994.35	48,706.23
North Grey Region -----	5,293.85	6,872.71	12,166.56
Nottawasaga Valley -----	969.74	2,091.03	3,060.77
Otonabee Region -----	7,535.26	7,597.99	15,133.25
Otter Creek -----	3,992.43	398.59	4,391.02
Sauble Valley -----	1,545.35	283.36	1,828.71
Saugeen Valley -----	12,248.65	6,861.98	19,110.63
Sixteen Mile Creek -----	10,130.05	46,338.83	56,468.88
South Nation River -----	759.54		759.54
Spencer Creek -----	2,883.49	18,825.63	21,709.12
Sydenham Valley -----	4,986.57		4,986.57
Twelve Mile Creek -----	10,615.86	23,430.37	34,046.23
Upper Thames River -----	35,911.23	547,721.32	583,632.55
Whitson Valley -----	559.64		559.64
	<u>\$417,960.05</u>	<u>\$3,979,389.83</u>	<u>\$4,397,349.88</u>
Less: Federal Contribution -----		1,138,759.94	1,138,759.94
	<u><u>\$417,960.05</u></u>	<u><u>\$2,840,629.89</u></u>	<u><u>\$3,258,589.94</u></u>

TREND OF TOTAL ANNUAL DISBURSEMENTS FOR THE TEN YEARS ENDED 31st. MARCH 1963

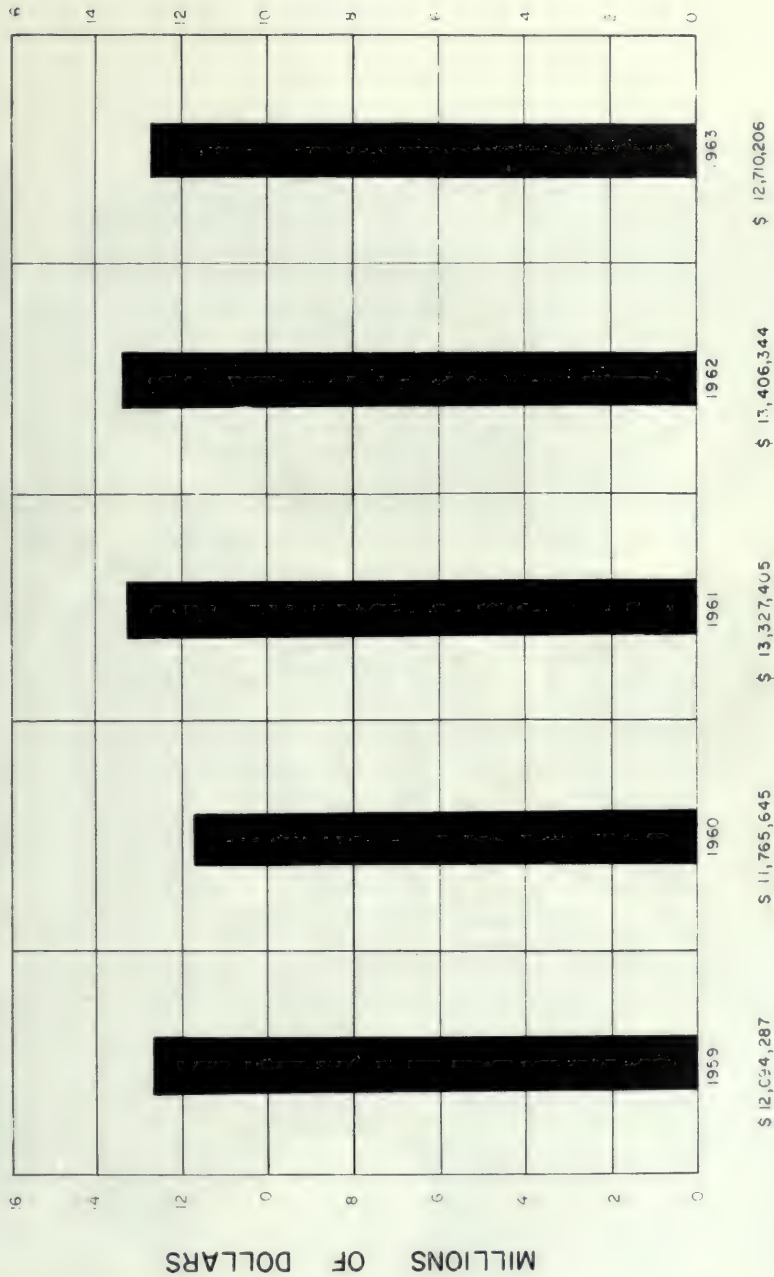


TREND OF TOTAL ANNUAL RECEIPTS FOR THE TEN YEARS ENDED 31st. MARCH 1963



TREND OF DEPARTMENTAL TIMBER REVENUE

CROWN DUES - GROUND RENT - FIRE PROTECTION CHARGES & MISCELLANEOUS
FOR THE FIVE YEARS ENDED 31st. MARCH 1963





Hon. A. Kelso Roberts, Q.C. (left), Minister of Lands and Forests, and Hon. Arthur Laing, Minister of Northern Affairs and National Resources, detonate a charge of dynamite at ground-breaking ceremonies at Claireville Dam in Peel County.

CONSERVATION AUTHORITIES BRANCH

THE Conservation Authorities Branch was transferred to the Department of Lands and Forests from the Department of Economics and Development on January 1, 1962. The Branch was originally established as a part of the Department of Planning and Development in 1944.

The Conservation Authorities Branch is concerned with the administration of The Conservation Authorities Act (1946). Under the Act, Conservation Authorities may be established on the basis of a watershed or drainage area of a stream or group of streams. The Branch advises and assists Conservation Authorities in carrying out conservation projects within the watersheds under their jurisdiction. The Branch is also concerned with the administration of The Grand River Conservation Act, 1938, and with the Parks Assistance Act, 1960.

Conservation Authorities are corporate bodies and involve the concept of local responsibility for the development and management of the resources of a watershed. The Act gives an Authority power to undertake programs in all fields of conservation. The initiative to form an Authority must come from the local municipal level. Once formed, an Authority retains the initiative to carry out conservation programs in its watershed. It is only when a Government grant is requested that the Branch examines the proposed project to ascertain if Provincial funds will be wisely expended.

CONSERVATION AUTHORITIES

On March 31, 1963, there were thirty-one Conservation Authorities in Ontario. These Authorities cover 21,586 square miles and include 460 municipalities. No new Conservation Authorities were formed in the year ending March 31, 1963.

The Neebing Valley Conservation Authority was enlarged from 86 square miles to 980 square miles and was renamed the Lakehead Region Conservation Authority. It now includes all of the organized municipalities in the Lakehead area.

Conservation Surveys and Reports

Newly established Conservation Authorities are not generally in a position to carry out an examination of the conservation problems of their watersheds. It has been Government policy, since the establishment of the first Authorities in 1946, to carry out at no expense to the Authority preliminary investigations of the resources of the watersheds concerned. These surveys are often the first service rendered to a new Authority. Information gathered in the surveys becomes the basis of a conservation report to the Authority. In recent years, special surveys for older established Authorities have been undertaken by the Branch on the request of the Authority.

Conservation reports compiled from the surveys treat the conservation

CONSERVATION AUTHORITIES BRANCH

Chief: A. S. L. BARNES

PLANNING & PROJECTS

Supervisor: F. G. Jackson

Field Supervision	A. D. Latornell
Wildlife & Recreation	K. M. Mayall
Forestry	P. M. R. Harvie
Parks Inspection	H. J. Christian
Land Use	

ENGINEERING

Supervisor: J. W. Murray

Project Engineering	F. J. Forbes
	C. R. Leuty
Surveys	A. F. Smith
Flood Forecasts	B. P. Sangal

HydrometeorologyD. N. McMullen
(Government of Canada)

problems of the watershed under such headings as history, land use, forestry, water, wildlife and recreation. The conservation reports deal with the use and development of the watershed's renewable resources on an integrated basis. Water problems are related to agricultural and forest uses of the land and to the growing urban demands. Forest use of the land is related to its agricultural capability. Wildlife and recreational resources are related to the water and land resources. The conservation reports become a working plan for the Authority to follow if it so wishes.

CONSERVATION SURVEYS, 1962-63

<i>Authority</i>	<i>Area</i>	<i>Surveys</i>
Nottawasaga	1,210 sq. mi.	forestry, land, recreation, wildlife
Sydenham	1,052 sq. mi.	water, land
Lower Thames	869 sq. mi.	water, land
Central Lake Ontario	242 sq. mi.	water
Mattagami	34 sq. mi.	water, forestry
Niagara (Welland R.)	950 sq. mi.	pollution

CONSERVATION REPORTS PUBLISHED

Mattagami Authority	Forest and Water Sections
Lower Thames Authority	Recreation Section
Sydenham Authority	Recreation Section
Central Lake Ontario Authority	Recreation and Wildlife Sections
Sauble Authority	Complete Report
Otter Creek Authority	Printed Summary of Complete Report

Authority Administration

An Authority must assume initiative for carrying out a conservation program in its watershed. It is Department policy to provide financial assistance to Authorities for the carrying out of capital projects as well as for administration of projects and general Authority work. Financial assistance at the present time amounts to a 50-per-cent grant for most Authority programs.

On capital schemes, when an Authority requests financial or technical assistance from the Province, it must submit a detailed description (a brief) of the proposed project (a scheme) to the Conservation Authorities Branch. The scheme must be approved by the Minister before a grant can be given. Briefs must be submitted for such capital schemes as dams and reservoirs and other water control works, and for the acquisition and development of land for recreation, reforestation and other conservation purposes.

Grants may also be made to the Authorities for ordinary or administrative costs. Included in these costs are per diem and travel to Authority members, salaries and expenses of Authority staff, office equipment, rents, utilities and other costs involved in the administration of the Authority program. Also included for grant in ordinary expenditures are Authority costs of vehicles and machinery, tree planting and soil conservation assistance programs, printed material, exhibits,

land investigations and various small conservation projects.

No grants are paid toward maintenance of Authority projects. Certain preliminary engineering work done by Authorities in the early stages of development of water control projects receives a 75-per-cent grant.

For large water control projects, the Government of Canada, through The Canada Water Conservation Assistance Act, may contribute on the basis of 37½ per cent of the cost of approved projects. The Province makes an equal grant on such projects, leaving the Authority with 25 per cent to be raised from its member municipalities.

The Authorities' funds for all conservation purposes are raised from the member municipalities. The basis of levy is either on a per capita basis, an assessment basis, or a combination of both.

Grants to Conservation Authorities under The Conservation Authorities Act are listed in Accounts Branch Statement No. 8.

Winter Works Projects

A number of Authorities carried out conservation projects under the Winter Works Incentive Program in 1962. These assisted in relieving unemployment in the Authority municipalities, and assisted the Authority, as well, in starting or completing certain conservation projects. In summary:—

Number of Authorities with winter works programs -----	15
Number of projects undertaken -----	38
Total cost of projects -----	\$518,580.00
Total direct project cost -----	\$238,530.00
Total number of men employed -----	355
Total number of man hours -----	20,000

AUTHORITY PROGRAMS

Water Control

Three Authorities have agreements with the Government of Canada for flood control and water conservation programs. Agreements were signed in 1961 by the Metropolitan Toronto and Region Conservation Authority, the Upper Thames River Conservation Authority and the Ausable River Conservation Authority. The total estimated cost of all projects being carried out by these three Authorities under their agreements is about 50 million dollars.

Many Conservation Authorities were originally established for flood control purposes. Almost all of the thirty-one Authorities in the Province have carried out water control projects of some nature. While good land use practices play an important role in reducing floods, in many instances flood control is only completely achieved by means of engineered structures. These structures have taken the form of large and small dams, channel improvement works, and by-pass channels.

The Fanshawe Dam, on the Thames River just above London, is an example of a large dam, now completed. Others are under construction on the Thames

and Humber watersheds. General improvement works may be seen in the Humber River at Weston, the Don River at Hogg's Hollow, and in the Thames at Ingersoll and Mitchell. The diversion of the Etobicoke River at Brampton, built in 1949 and 1950 by the Etobicoke Conservation Authority (now incorporated in the Metropolitan Toronto and Region Authority), shows the function of a by-pass channel.

Reservoirs impounded by large dams may have recreation value as well as flood control. The Upper Thames River Conservation Authority has developed the Fanshawe Reservoir for recreation. Over 125,000 people used the beach, water, and camping facilities in 1962.

In addition to large dams and reservoirs, a number of Authorities have built smaller dams. Small dams have value for irrigation water supply, regulation of summer flow and municipal water supply. The Morrison Dam at Exeter built by the Ausable River Conservation Authority, the Kelso Dam near Milton constructed by the Sixteen-Mile Authority and the Kelly Lake Dam in the Junction Creek at Sudbury, built by the Junction Authority, are examples of small multi-use structures.

WATER CONTROL PROJECTS

1962 EXPENDITURES

FEDERAL-PROVINCIAL-AUTHORITY AGREEMENTS

(a) Cost Sharing: Canada — 37½ %, Ontario — 37½ %, Authority — 25 %

Authority	Project	Engineering & Construction Costs	Land Costs
RESERVOIRS			
M.T.R.C.A.	Claireville	62,595	247,945
	Ebenezer	25,133	40,194
	Bolton	223	185,594
	King Creek		2,171
	Finch		12,616
	Boyd		7,354
U.T.V.C.A.	Willowdale		34,382
	Wildwood	46,895	412,178
	Woodstock	39,433	2,805
	Mitchell	131,277	
		305,556	945,139
CHANNEL IMPROVEMENTS			
M.T.R.C.A.	Black Creek	543,700	55,165
	Woodbridge	454,185	13,292
	York Mills	12,125	2,000
U.T.V.C.A.	Woodstock	8,994	
	Cedar Creek	13,183	
		1,032,187	70,457
WATERSHED STUDIES			
M.T.R.C.A.	Don River	71,616	
	Humber, Main & East Branches	54,721	
		126,337	

(b) Cost Sharing: Ontario — 50%, Authority — 50%

Authority	Project	Engineering & Construction Costs	Land Costs
RESERVOIRS			
M.T.R.C.A.	Snelgrove	9,402	9,877
	Milne	1,368	54,594
	Arthur Percy	264	
		<hr/> 11,034	<hr/> 64,471
WATERSHED STUDIES			
M.T.R.C.A.	Duffin Creek	19,596	
		<hr/> 19,596	
FLOOD PLAIN LANDS ACQUISITION			
M.T.R.C.A.	Etobicoke Creek		1,325
	Mimico Creek		1,076
	Humber River		206,775
	Don River		23,283
	Highland Creek		8,643
	Rouge River		15,661
	Duffin Creek		36,079
			<hr/> 292,842
STANDARD WATER CONTROL SCHEMES			
Authority	Project	1962 Cost	Ontario Grant
SMALL DAMS — NEW CONSTRUCTION			
Junction Sixteen-Mile	Kelly Lake	61,617	50%
	Kelso	97,950	50%
		<hr/> 159,567	
SMALL DAMS — REPAIRS OR IMPROVEMENTS			
Big Creek	Teeterville	1,558	50%
	Quance	432	50%
Credit	Belfountain	15,955	50%
Crowe	Allan's Mill	179	50%
	Marmora	188	50%
Ganaraska	Garden Hill	594	50%
Grand	Breslau	763	50%
Napanee	Second Depot Lake	208	50%
North Grey	Thornbury	3,004	50%
		<hr/> 22,881	
CHANNEL IMPROVEMENTS			
Credit	Erindale	8,428	50%
	Nith River—New Hamburg	985	50%
Grand	Nith River—Paris	3,226	50%
	Lower Humber	9,640	50%
M.T.R.C.A.	Main Humber	5,844	50%
	Don River—West Branch	2,582	50%
	Black Creek	69,043	50%
Saugeen	Walkerton	8,447	50%
	Mitchell	6,232	50%
U.T.V.C.A.		<hr/> 114,427	

Authority	Project	1962 Cost	Ontario Grant
FLOOD PLAIN & RESERVOIR LAND ACQUISITION			
Credit	Orangeville—Reservoir	739	50%
Lower Thames	Delaware Twp.—F.P.L.	250	50%
M.T.R.C.A.	Highland Creek—F.P.L.	100,457	50%
	Black Creek—F.P.L.	43,179	50%
	Highland, Humber—F.P.L.	86,676	50%
Sauble	Rankin River—Reservoir	416	50%
Twelve-Mile	Morrison—F.P.L.	1,087	50%
		<hr/> 232,804	

RESERVOIR IMPROVEMENT			
Grand	Breslau	5,510	50%
Holland	Fairy Lake	40,015	50%
		<hr/> 45,525	

STREAM GAUGES			
Credit	Norval	331	50%
Grand	Whiteman Creek	397	50%
M.T.R.C.A.	Humber	5,524	50%
	Don	3,018	50%
Moir	Skootamatta	1,346	50%
Spencer	Dundas	526	50%
		<hr/> 11,142	

PRELIMINARY ENGINEERING			
Credit	Mullet Creek	1,825	75%
Grand	Speed River	3,755	75%
	Nith River	1,985	75%
Junction	Junction Creek	7,628	75%
M.T.R.C.A.	Humber & Don Rivers	2,829	50%
	Mimico Creek	50,255	75%
Otter	Norwich Dam	2,249	75%
Spencer	Ancaster Creek	450	75%
Twelve-Mile	Mountsberg Reservoir	1,494	75%
		<hr/> 72,470	

Not all small dams in Authority control are new ones. A number of Authorities have acquired control of old mill dams and surrounding land. Necessary repairs have been carried out on these dams and they fulfil a valuable function of pooling water for the improvement of summer flow and for recreational use. Examples of such dam restoration are the Thornbury Dam on the Beaver River, repaired by the North Grey Region Conservation Authority, and the Credit River Dam at Belfountain, restored by the Credit Authority.

In many river valleys, flood control can be effectively achieved by public control of the flood plain lands to prevent encroachment and building on the low lying land. Such control is necessary in conjunction with the building of dams and channel improvements. Three Authorities had flood plain land acquisition programs underway in 1962. Flood plain surveys and mapping, necessary preliminaries to land acquisition, were carried out in the valleys of several other Authorities.

Hydrometeorology and Flood Warning

Variations in meteorological conditions have a pronounced effect on the flow pattern of the streams and rivers of Southern Ontario. Problems concerning the relationship between meteorology and hydrology must be considered in detail before control works can be established on a river. Hydrometeorological analyses are therefore an important part of the water studies undertaken by the Conservation Branch.

An extensive network of precipitation and stream gauge stations has been established on the watersheds in Southern Ontario. Data from these stations are used to relate rainfall, snowmelt and soil moisture conditions to run-off. Such studies establish the characteristic of the stream under a variety of meteorological conditions. These studies are necessary to establish the capacity of reservoirs, the size and type of dam structures or channel improvements, and the availability of water for a number of uses.

The need for a flood warning system in Ontario became abundantly clear following the disaster caused by Hurricane Hazel in 1954. In 1955 the Meteorological Branch of the Canada Department of Transport seconded a meteorologist to the Conservation Authorities Branch to establish a flood warning system. The hydrometeorologist is responsible for maintaining a watch over conditions, issuing flood forecasts, supervising the operation of flood control reservoirs and establishing meteorological design criteria for river control structures.

A basic feature of the flood warning system is the close co-operation between the Federal Government department responsible for weather forecasts and the Provincial Government department responsible for river control. The Meteorological Branch of the Canada Department of Transport, which is responsible for weather forecasting in Canada, issues the necessary weather data, weather forecasts, and warnings of severe weather conditions. The Conservation Authorities Branch applies this weather information to conditions existing on the watersheds and issues flood forecasts based on the results of the correlation of these two types of information.

SOIL CONSERVATION AND LAND USE

Authority projects in soil conservation form an important part of the overall program. The nature of these projects, however, is such that they are often less spectacular and hence less noticed than flood control structures or conservation and recreation projects.

The use and management of soil is primarily the concern of the individual landowner. The major Government responsibility for assisting agriculture is vested in the Department of Agriculture. Conservation Authorities tend to limit soil conservation programs to publicizing the need for, and the value of, good soil management. In their programs, the Authorities work in close co-operation with the Department of Agriculture and the Ontario Agricultural College. The County Agricultural Representatives are usually members of the Authorities' land use advisory boards.

FARM PONDS

Two-thirds of the Conservation Authorities give financial and technical assistance to farm pond design and construction. Financial assistance is given in

grants ranging from \$50 to \$500 per pond. The amount of grant and conditions attached to it vary with the individual Authorities.

In 1962, subsidies were paid on 133 ponds by 11 Conservation Authorities.

Pond sites surveyed:—480 in 16 Conservation Authorities.

FARM DRAINAGE

One Conservation Authority, the Metropolitan Toronto and Region, gives financial assistance towards the drainage of farm land. Upon completion of the drainage work to the satisfaction of the Department of Agriculture, the Authority gives a subsidy of two cents per tile.

The Ausable River Conservation Authority has adopted an assistance policy through which it gives technical and financial assistance towards the building of proper outlets for farm tile drainage systems.

GRASSED WATER COURSES

Two Conservation Authorities extend financial assistance in the form of a subsidy to landowners to build an approved grass waterway on their farms. The maximum amount payable is \$200 per farm.

DEMONSTRATIONS

One of the most effective ways of arousing interest in conservation farming and improved farm use practices is by demonstration. Conservation Authorities carry out land use demonstrations in several ways.

One method is to purchase land and establish on it demonstrations of approved land management. The Grand Valley Conservation Authority has one such property of fifty acres on which they have carried out control of gullies, constructed a farm pond and done reforestation and pasture improvement work.

Twelve Conservation Authorities have established demonstrations of such conservation measures as pasture management, reforestation, gully control, stream-bank erosion control and contouring and strip-cropping on Authority-owned properties. These demonstrations have proved an effective means of informing the public of the value of conservation measures.

The Saugeen Valley Conservation Authority has established a demonstration pasture farm on land that tends towards the marginal for most farming purposes. This demonstration shows the possibilities of various types of pasture management and seed mixtures for these classes of land. The demonstration has attracted considerable interest.

LAND JUDGING COMPETITIONS

A project becoming increasingly popular is the land judging competition. Many of them are sponsored jointly by Conservation Authorities, the Ontario Agricultural College and the Department of Agriculture. In 1962, eight Conservation Authorities helped to sponsor thirteen land judging competitions.

AUTHORITY LAND USE AND FOREST ASSISTANCE PROGRAMS

Program	Authority	
Farm Ponds Assistance	Big Creek Credit Ganaraska Grand Holland Lower Thames Maitland M.T.R.C.A. Moir	Niagara North Grey Otonabee Saugeen Sixteen-Mile Twelve-Mile Spencer Sydenham Upper Thames
Pasture Demonstrations	Saugeen—Bell's Lake M.T.R.C.A.—Albion Hills Grand—Elora Grand—Smeltzer	
Gully Control	Big Creek Grand	M.T.R.C.A. Credit
Land Judging Competitions (one or more sponsored in co-operation with the Department of Agriculture)	Ausable Central Lake Ontario Grand Lower Thames M.T.R.C.A.	Niagara Otonabee Sixteen-Mile Twelve-Mile Upper Thames
Private lands reforestation assistance (type and amount of assistance varies between Authorities)	Ausable Big Creek Central Lake Ontario Credit Grand Holland M.T.R.C.A. Moir Niagara	North Grey Otter Sauble Saugeen Spencer Sydenham Lower Thames Upper Thames

FOREST CONSERVATION

Forests have an important and often intangible part to play in a watershed management program. Forests are the natural covering for headwater areas, swamps and gravel moraines which give rise to many small tributary streams. Forests are often the only crop which can be grown on rough, rocky soils. Forests embrace other factors in the conservation program such as surface or underground water storage, wildlife management and recreation.

Most conservation reports to the Authorities recommend the establishment of an Authority Forest. Authority Forests may consist of existing woodlands, plus areas of lands that must be reforested. The primary functions of an Authority Forest in the conservation of a watershed are the protection of source areas, the control and prevention of erosion and the return to forest of abandoned and open lands suitable only for reforestation.

To date approximately one million acres have been recommended for acquisition by Authorities in the conservation reports.

In 1962, 4,327 acres were added to the Authority Forests, bringing the total acreage to 58,425.

The Ganaraska River Conservation Authority, one of the oldest Authorities in Ontario, has during the past fourteen years purchased over 40 per cent of the area recommended in its conservation report.

AUTHORITY FORESTS UNDER AGREEMENT

Authority	Area Purchased 1962	Total, Dec. 1962
Ausable -----	375	4,066
Big Creek -----	162	2,163
Catfish -----		133
Ganaraska -----	242	8,065
Grand -----	305	4,719
Lakehead -----		1,665
Maitland -----		466
M.T.R.C.A. -----	150	1,467
Moirs -----	903	11,291
Napanee -----	800	5,063
North Grey -----	500	3,894
Otter -----	51	1,034
Sauble -----		1,580
Saugeen -----	627	9,395
Spencer -----	12	12
South Nation -----	187	187
Upper Thames -----	13	3,225
Totals -----	4,327	58,425

Reforestation Assistance to Landowners

Various types of assistance are given by Conservation Authorities to private landowners in order to promote better land use in areas outside of the Authority Forest. Private owner assistance may include direct subsidization of private planting, or the provision of planting machinery and planting crews.

In 1962, some 922,000 trees were planted by 11 Authorities under private lands reforestation assistance policies. This represents an area of about 770 acres.

Trees for reforestation purposes on Authority watersheds are obtained from the nurseries operated by the Department. Landowners are responsible for ordering the seedling trees, and paying for them at the usual rate. A number of Authorities pick up the trees at the nursery as part of their tree planting service.

WILDLIFE CONSERVATION

Authorities are much concerned with the place of wildlife resources in their conservation program. Many of the Conservation Authorities have set up fish and wildlife advisory boards. The wide scope of Conservation Authority programs provides many opportunities for fish and wildlife management projects.

Several Conservation Authorities are acquiring extensive areas of flood plain lands. Such properties make stretches of streams available. These purchases have included both habitat for warm water fish and for trout. In those areas where fishing pressure occurs, arrangements have been made with the Department of Lands and Forests for stocking of the streams.

Authorities are now being encouraged to include plans for fish and wildlife programs along with their engineering of flood control structures. Authorities are beginning to appreciate the value of tailwater fishing (particularly where a bottom discharge can provide trout habitat) and therefore to plan below a reservoir as well as above it. The excellent waterfowl hunting at the Luther Reservoir is a by-product of the flood control program of the Grand River Conservation Commission.

Two Conservation Authorities now are producing shrubs for wildlife habitat improvement. The Metropolitan Toronto and Region Conservation Authority and the Upper Thames River Conservation Authority are making extensive use of the shrubs and trees produced in their own nurseries for planting in reforestation and conservation lands.

Conservation Authorities have discovered that nature trails constructed in their conservation areas are an excellent means of providing public education as well as public enjoyment. Most of the Conservation Authorities have constructed nature trails in their major conservation areas.

Research

One Authority in particular, the Metropolitan Toronto and Region, has undertaken an extensive program in the field of research, particularly in the control of aquatic weeds and algae in farm ponds. The Authority is continuing its research into the construction features of farm ponds in relation to good fish habitat. They have also undertaken experimental planting of plots of various species of plants and shrubs which have value as wildlife habitat.

Forest and Wildlife Conservation Areas

Several Authorities are considering the acquisition and development of land for low intensity recreational use. These lands will have forest cover on a percentage of the area and generally include streams or ponds which can be developed for fishing. Wildlife habitat will be encouraged in the open spaces. Limited recreational facilities such as picnic tables will be provided. Primarily, such properties are for nature study and for fishing. The Metropolitan Toronto and Region Conservation Authority has one such property, the Palgrave Fish and Wildlife Conservation Area in the Humber watershed, which has been developed along such lines.

RECREATION

Conservation reports made to Authorities contain a section dealing with the recreational resources of the watershed and include recommendations for development of some of these areas. Such recommendations are made in conjunction with others for the use of land — such as those dealing with the construction of reservoirs and with reforestation.

Lands acquired by Authorities for conservation purposes, parts of which are used for recreation, are known as conservation areas. These areas are developed with such recreational facilities as picnic tables and shelters, fireplaces, swimming areas and beaches. Facilities for camping and boating, fishing and hunting, skating, skiing and nature study are also important. Recreational use of Authority lands is developed usually in conjunction with and ancillary to its other conservation uses; for example, recreation may be developed on flood plain lands, valley slopes, around source areas and reforestation lands, woodlands and wetlands acquired by the Authority.

The creation of conservation areas with their recreational facilities has been one of the most important developments in many of the Authorities in the

Province. The fact that there has been such spectacular growth of conservation areas indicates first the need for such facilities and second the fact that these facilities can be developed as an adjunct to other conservation practices.

Parts of many conservation areas have already been developed for intensive public use. Some other conservation areas have been acquired and are now being held until either the need for the use increases or the funds become available for more intensive development.

The three Authorities which have agreements with the Federal and Provincial Governments for water control projects (referred to in the water section of this report) are planning extensive recreational development around some of the reservoirs.

The acquisition and development of land for conservation areas usually receives a grant of 50 per cent from the Province. Maintenance costs, however, are borne entirely by the Authority. To meet these costs most Authorities charge an admission fee to the major areas. Authorities are free to set such admission fees as they see fit. A common charge levied by Authorities is 50c per car.

CONSERVATION AREAS ATTENDANCE

Authority	1960	1961	1962
Big Creek -----	36,000	125,000	80,000
Credit -----	96,000	88,000	96,000
Grand -----	178,000	185,000	231,000
M.T.R.C.A. -----	773,000	850,000	898,000
Niagara -----	48,000	58,000	70,000
Moirra -----			22,000
Sixteen-Mile -----			22,000
Upper Thames -----	88,000	103,000	160,000
Others -----	243,000	262,000	225,000
Totals -----	1,462,000	1,671,000	1,804,000

CONSERVATION AREAS FACILITIES

Number of Areas with Facilities for Recreation

Authority	No. of Areas	Total Acreage	Picnics	Swimming	Fishing	Cons. Dem.*	Camping Overnight	Facilities Group
Ausable	5	130	5	2	4	4	0	0
Big Creek	5	538	5	1	4	1	1	2
Credit	3	414	2	2	2	2	1	2
Ganaraska	3	57	3	1	1	1	0	0
Grand	4	747	4	3	4	2	4	3
Holland	1	40	1	0	0	1	0	0
M.T.R.C.A.	9	4,024	9	4	7	9	0	7
Moirra	3	550	3	1	3	2	1	1
Napanee	1	320	1	1	1	1	0	0
Niagara	3	284	2	1	0	2	1	1
North Grey	4	215	3	4	4	2	0	0
Otonabee	2	290	1	1	1	2	0	0
Otter	2	25	2	0	0	1	0	0
Sauble	1	2	1	0	0	0	0	0
Saugeen	6	89	6	3	3	1	1	1
Sixteen-Mile	5	575	3	2	4	3	1	1
Spencer	2	312	0	0	0	0	0	0
Twelve-Mile	5	636	4	1	1	2	1	0
Upper Thames	14	2,894	12	9	11	6	2	2
Grand Commission	3	334	3	2	2	1	2	0
Totals	81	12,476	70	38	52	43	15	20

*Conservation Demonstrations

PUBLIC RELATIONS

Public relations are an important task of every Conservation Authority. The Authority has the problem of informing the public of why the Authority was formed, what are its objectives, and how the objectives can be met. The Authority must also show people why their conservation expenditures require tax dollars from watershed residents. The nature of conservation problems and the need for co-operation among a number of governing bodies must be pointed out.

Authorities use every means of publicity and education that is available. These include the standard media of radio, television and press, as well as exhibits, demonstrations and field days. Authority staff and representatives give frequent talks to service clubs and other interested bodies. Authorities inaugurate and help carry out soil judging competitions. In the spring they hold tree planting days, competitions for school children, boy scout and girl guide organizations. During the school year they organize conservation scrap book competitions, bird house building competitions and leaf collections.

Several Conservation Authorities have had films made of their watershed and their conservation projects. Notable among these films are the Metropolitan Toronto and Region Conservation Authority's "A Town and its River", "Legacy of the Valley" and "Pioneer Village". A number of Authorities have published summaries of their activities for public distribution.

HISTORY

During the course of acquisition of lands for conservation purposes a number of Authorities have obtained control of historic sites and buildings. In order to preserve these, several Authorities have developed historic villages or restored old mills and buildings and made them accessible to the public.

Examples of historic buildings which have been restored by Conservation Authorities include the mill in the O'Hara Conservation Area near Madoc. This sawmill, originally built in 1846-47, is unique in Ontario. It is now the property of the Moira River Conservation Authority. The Big Creek Conservation Authority has acquired and restored the old grist mill in the Backus Conservation Area in Norfolk County.

Three Authorities, the Metropolitan Toronto and Region, the Upper Thames and the Grand Valley, have undertaken development of pioneer villages. The largest and most ambitious of these is Pioneer Village, in the Black Creek Conservation Area in northwest Toronto, developed by the Metropolitan Toronto and Region Conservation Authority. That Authority plans to complete development of this typical agricultural community of pre-Confederation days by Canada's centenary year, 1967.

The pioneer village in the Fanshawe Park near London has been a project of the Upper Thames River Conservation Authority. It represents a village of the 1830's and its buildings are typical of southwestern Ontario of that date. The Grand Valley Conservation Authority provided the site for the Doon Pioneer Village at the Doon Conservation Area. The actual development of the village itself has been financed and directed by the Ontario Pioneer Community Foundation of Waterloo County.

The development of historic sites and villages in the Authorities has attracted much public attention. In 1962 over 150,000 people visited these various sites. A significant number of those attending were children.

Historic sites and pioneer villages are financed entirely by the Authorities from their municipal revenues. Such developments do not receive Provincial grants.

THE GRAND RIVER CONSERVATION COMMISSION

The Grand River Conservation Commission was established in 1938 under the Grand River Conservation Act. This Commission is composed of twelve members representing eight urban municipalities. These municipalities are the Cities of Brantford, Galt, Kitchener, Waterloo, the Towns of Paris, Preston and Fergus, and the Village of Elora.

Established eight years before the passing of The Conservation Authorities Act, The Grand River Conservation Commission was charged with the responsibility of dealing with water problems on the Grand River. It is empowered to erect works, and create reservoirs by the construction of dams.

The Commission has carried out three major projects. The first of these was the Shand Dam and Reservoir on the upper Grand River near Fergus. This dam was completed in 1942. The second project was the Luther Marsh Dam and Reservoir in the Grand River headwaters, completed in 1953. The most recent project has been the Conestogo Dam completed in 1957.

All of these projects built at a total cost of just over seven million dollars were primarily for flood control on the Grand River. All three projects were financed jointly by the Government of Canada at 37½ per cent, the Government of Ontario at 37½ per cent and the benefiting municipalities at 25 per cent.

THE PARKS ASSISTANCE ACT

The Parks Assistance Act was passed in 1960. Under it, municipalities may secure grants for the acquisition, planning and development of parks for public recreational use. The grants on approved parks are 50 per cent of the costs up to a maximum grant per project of \$50,000.

The main requirements in developing a park to qualify for a grant under the Act are that sites for overnight tent and trailer camping, adequate sanitary facilities, drinking water, and picnic facilities must be provided. Other developments that can receive a grant include road construction, picnic shelters, swimming, boating, skiing and skating facilities, change houses, beaches and nature trails. Flush-type comfort stations, cooking and laundry facilities may also receive grants.

Up to March 31, 1963, 234 enquiries for information on The Parks Assistance Act had been received and 25 parks have been approved for grants and are now under development. This brings the area of these parks to a total of 1,500 acres which, when completely developed, will provide some 1,600 campsites. Grants totalling over \$400,000 have been authorized for these projects. Some of the work is carried out under Winter Works Incentive Programs.

During 1962, the Act was amended to permit Indian Bands to participate in benefits under the Act.

The Act makes available to rural and urban municipalities much needed assistance for the acquisition and development of revenue-producing recreational areas to meet the constantly increasing demands for such space and facilities.

Grants to municipalities under The Parks Assistance Act are listed in Accounts Branch Statement No. 6.



Mount Pleasant Public Fishing Area, opened in May, 1962, on ponds previously used by a Provincial hatchery, was a popular success, especially with young anglers.



The black bear has become an important big game animal.

FISH AND WILDLIFE BRANCH

THE prosperity of our province, and its growth in population and productivity, have not brought in their wake any real reduction in the supply of game and fish. Moose are abundant. We are using only a third of the allowable annual harvest, and are more than a little worried over reports of heavy tick infestation. Deer are recovering from a series of bad winters. Ruffed grouse are on the upswing of their famous cycle. The waters of the north have continued to produce fish to delight the tourist.

In the densely settled areas, likewise, there is no depletion of game. There is, however, a rapidly spreading restriction of access to private lands, as farmers grow restive at the numbers who wish to use their lands. The fact that there is no shortage of rabbits or groundhogs does not alter the case. Available access to waters is also crowded to the limit. This is true for all recreational water-use, but is felt by anglers, and especially by the would-be, rather than experienced, angler.

In other areas which have passed through the same pattern of experience it has been found that, without in any way diminishing the importance of private lands in providing hunting, or of private access to waters, the pressure can be taken off by setting up public hunting and fishing areas.

Previous reports have described how public hunting has been provided in provincial parks, and two small areas had already been obtained. During the year an important area in eastern Ontario, the Winchester Swamp, was obtained from the Department of National Defence. We also established our first Public Fishing Area, in the former Mount Pleasant Hatchery, near Brantford.

These activities have the virtue merely of pilot projects in the light of the recreational land acquisitional program announced in the Speech from the Throne, which will really provide a safety-valve for the build-up of public pressure. They are, however, an assurance of the reception that the new areas are bound to receive.

The response to the Mount Pleasant Public Fishing Area was particularly encouraging. This hatchery, with an uncertain water supply, had reached the point where it could be used only seasonally for trout, and at some risk, and artificially-reared warm water fish are not required in the area. As an operational liability, with deteriorating facilities, it could have been closed, but, instead, its ponds were simply filled with pan fish and thrown open for angling. The response was strong and immediate. Two things, the fact that many young anglers were obviously catching their first fish, and the use of pan fish, were both encouraging. In regard to the pan fish, many of our finest southern Ontario fishing grounds are so "civilized" now that they are being heavily fertilized. Nets show that game fish are there but they are often hard to catch. Pan fish are universally available, for unlimited use, whether to be caught locally, or netted to supply suburban fish ponds, such as Mount Pleasant.

FISH AND WILDLIFE BRANCH

Chief: C. H. D. Clarke

WILDLIFE SECTION

Supervisor: D. N. Omand

Game Management
Fur Management
Field Services
Indian Affairs Agreement

FISHERIES SECTION

Supervisor: H. H. MacKay

Game Fish and Hatcheries
Commercial Fisheries

SPECIAL STAFF

Chief's Clerical Staff
Departmental Consultant
Accounts and Staff Records
Reports, Publications and Laboratory

WILDLIFE SECTION

Open Seasons

MOOSE

SCHEDULE 9 — Residents and Non-Residents

September 15, 1962 to January 3, 1963.

Beginning at the intersection of the boundary between Ontario and Quebec with the southerly shore of James Bay; thence southerly along that boundary to its intersection with the centre line of the right of way of the most northerly east-west line of the Canadian National Railways; thence westerly along that centre line to its intersection with a meridian line through the northeast corner of the geographic Township of Bell in the Territorial District of Thunder Bay; thence northerly along the said meridian line to its intersection with the Albany River; thence in a general northerly and westerly direction following that river to the Wabassi River flowing into the Albany River; thence in a northwesterly direction following the Wabassi River to its intersection with the 11th Base Line; thence westerly along the 11th Base Line to its intersection with the Inter-provincial boundary between Ontario and Manitoba; thence northerly and northeasterly along that boundary to the shore of Hudson Bay; thence easterly, southerly, southeasterly and easterly along the shores of that bay and James Bay to the place of beginning.

SCHEDULE 10 — Residents and Non-Residents

October 1, 1962 to January 3, 1963.

Beginning at the intersection of the boundary between the geographic townships of Dymond and Bucke in the Territorial District of Timiskaming with the high-water mark along the westerly shore of Lake Timiskaming; thence westerly along the southerly boundaries of the geographic townships of Dymond, Hudson, Lundy, Auld, Speight, Banks and Wallis to the southwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundaries of the geographic townships of Trethewey and McGiffin to the southwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundaries of the geographic townships of Selby and Acadia in the Territorial District of Sudbury to the southwesterly corner of the last-mentioned geographic township; thence westerly along the northerly boundary of the geographic Township of Seagram to the northwesterly corner thereof; thence southerly along the westerly boundaries of the geographic townships of Seagram, Clary and Sheppard to the southwesterly corner of the last-mentioned geographic township; thence westerly along the northerly boundary of the geographic Township of Mackelcan to the northwesterly corner thereof; thence southerly along the westerly boundary of the geographic Township of Mackelcan to the southwesterly corner thereof; thence westerly along the northerly boundaries of the geographic townships of Rathbun, Norman, Wisner, Howell, Fox, Harty, Hess, Moncrieff and Craig to the northwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundary of the geographic township of Craig

to the southwesterly corner thereof; thence westerly along the northerly boundary of geographic Township Tp. 114 to the northwesterly corner thereof; thence westerly along the northerly boundaries of geographic townships A, E, I, M, Q, U, Tp. 1A, Tp. 1B, Tp. 1C, Tp. 1D, Tp. 1E and Tp. 1F in the Territorial District of Algoma to the northwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundary of geographic Township Tp. 1F to the intersection with the northerly boundary of geographic Township Tp. 195; thence westerly along the northerly boundaries of geographic townships Tp. 195 and Tp. 201 to the northwesterly corner of the last-mentioned geographic township; thence northerly along the easterly boundary of the geographic Township of Curtis and the easterly boundaries of geographic townships Tp. 22, Range 10, Tp. 22, Range 11 and Tp. 22, Range 12 to the northeasterly corner of the last-mentioned geographic township; thence westerly along the northerly boundaries of geographic townships Tp. 22, Range 12 and Tp. 23, Range 12 to the northwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundary of geographic Township Tp. 23, Range 12 to the northeasterly corner of geographic Township Tp. 24, Range 12; thence westerly along the northerly boundaries of geographic townships Tp. 24, Range 12, Tp. 25, Range 12, Tp. 26, Range 12 and Tp. 27, Range 12 to the northwesterly corner of the last-mentioned geographic township; thence northerly along the easterly boundary of the geographic Township of Palmer to the northeasterly corner thereof; thence westerly along the northerly boundary of that geographic township to the northwesterly corner thereof; thence southerly along the westerly boundaries of the geographic townships of Palmer and Fisher to the southwesterly corner of the last-mentioned geographic township; thence southerly along the southerly production of the westerly boundary of the geographic Township of Fisher to the intersection with the International Boundary between Canada and the United States of America; thence in a general northwesterly, southwesterly and westerly direction following that international boundary to a point in Saganaga Lake where that international boundary is intersected by the easterly boundary of the Territorial District of Rainy River; thence northerly along that easterly boundary to the northeasterly corner of that territorial district; thence westerly along the northerly boundary of that territorial district to the intersection with the 7th Meridian; thence northerly along the 7th Meridian in the Territorial District of Kenora to the intersection with the southerly boundary of the geographic Township of MacNicol; thence easterly along the southerly boundaries of the geographic townships of MacNicol, Tustin and Bridges to the southwesterly corner of the geographic Township of Docker; thence in a northerly direction along the westerly boundaries of the geographic townships of Docker and Smellie to the northwesterly corner of the last-mentioned geographic township; thence northerly along the northerly production of the westerly boundary of the geographic Township of Smellie to the intersection with the centre line of the right of way of the most northerly east-west line of the Canadian National Railways; thence westerly along that centre line to the intersection with the boundary between Ontario and Manitoba; thence northerly along that boundary to the intersection with the 11th Base Line; thence easterly along the 11th Base Line to the Wabassi River flowing into the Albany River; thence in a general southerly and easterly direction following that river to the Albany River; thence in a general southeasterly direction along the Albany River to the intersection with the meridian line drawn north astronomically from the northeasterly corner of the geographic Township of Bell in the Territorial District of Thunder Bay; thence south astronomically along that meridian line to the intersection with the centre line of the right of way of the most northerly east-west line of the Canadian

National Railways; thence in a general southeasterly direction along that centre line to its intersection with the boundary between Ontario and Quebec; thence southerly along that boundary to the northerly shore of Lake Timiskaming; thence in a general southerly and westerly direction following the shore of Lake Timiskaming, being the southerly boundaries of the geographic townships of Harris and Dymond in the Territorial District of Timiskaming, to the place of beginning.

SCHEDULE 11 — Residents and Non-Residents

November 5 to November 30, 1962.

Beginning at the intersection of the boundary between the geographic townships of Dymond and Bucke in the Territorial District of Timiskaming with the high-water mark along the westerly shore of Lake Timiskaming; thence westerly along the southerly boundaries of the geographic townships of Dymond, Hudson, Lundy, Auld, Speight, Banks and Wallis to the southwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundaries of the geographic townships of Trethewey and McGiffin to the southwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundaries of the geographic townships of Selby and Acadia in the Territorial District of Sudbury to the southwesterly corner of the last-mentioned geographic township; thence westerly along the northerly boundary of the geographic Township of Seagram to the northwesterly corner thereof; thence southerly along the westerly boundaries of the geographic townships of Seagram, Clary and Sheppard to the southwesterly corner of the last-mentioned geographic township; thence westerly along the northerly boundary of the geographic Township of Mackelcan to the northwesterly corner thereof; thence southerly along the westerly boundary of the geographic Township of Mackelcan to the southwesterly corner thereof; thence westerly along the northerly boundaries of the geographic townships of Rathbun, Norman, Wisner, Howell, Foy, Harty, Hess, Moncrieff and Craig to the northwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundary of the geographic Township of Craig to the southwesterly corner thereof; thence westerly along the northerly boundary of geographic Township Tp. 114 to the northwesterly corner thereof; thence westerly along the northerly boundaries of geographic townships A, E, I, M, Q, U, Tp. 1A, Tp. 1B, Tp. 1C, Tp. 1D, Tp. 1E and Tp. 1F in the Territorial District of Algoma to the northwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundary of geographic Township Tp. 1F to the intersection with the northerly boundary of geographic Township Tp. 195; thence westerly along the northerly boundaries of geographic townships Tp. 195 and Tp. 201 to the northwesterly corner of the last-mentioned geographic township; thence northerly along the easterly boundary of the geographic Township of Curtis and the easterly boundaries of geographic townships Tp. 22, Range 10, Tp. 22, Range 11, and Tp. 22, Range 12 to the northeasterly corner of the last-mentioned geographic township; thence westerly along the northerly boundaries of geographic townships Tp. 22, Range 12, and Tp. 23, Range 12 to the northwesterly corner of the last-mentioned geographic township; thence southerly along the westerly boundary of geographic Township Tp. 23, Range 12 to the northeasterly corner of geographic Township Tp. 24, Range 12; thence westerly along the northerly boundaries of geographic townships Tp. 24, Range 12, Tp. 25, Range 12, Tp. 26, Range 12 and Tp. 27, Range 12 to the northwesterly corner of the last-mentioned geographic township; thence northerly along the easterly boundary of the geographic

Township of Palmer to the northeasterly corner thereof; thence westerly along the northerly boundary of that geographic township to the northwesterly corner thereof; thence southerly along the westerly boundaries of the geographic townships of Palmer and Fisher to the southwesterly corner of the last-mentioned geographic township; thence southerly along the southerly production of the westerly boundary of the geographic Township of Fisher to the intersection with the International Boundary between Canada and the United States of America; thence in a general southeasterly direction along the last-mentioned boundary through Lake Superior and the St. Mary River to a point in that boundary due south of the intersection of the boundary between the geographic townships of Parke and Awenge in the Territorial District of Algoma with the northerly shore of the St. Mary River; thence due north to that northerly shore; thence in a general easterly direction following the northerly shores of the St. Mary River, the expansions thereof and the North Channel of Georgian Bay of Lake Huron to the southwesterly corner of the geographic Township of Spragge in the said Territorial District of Algoma; thence northerly along the westerly boundary of that geographic township to the intersection with the centre line of that part of the King's Highway known as No. 17; thence northeasterly, southeasterly and easterly following that centre line to the intersection with the centre line of the right of way of the Canadian Pacific Railway Company in the Town of Mattawa; thence northerly along that centre line to the intersection with the high-water mark along the westerly bank of the Ottawa River; thence northerly along that high-water mark and the high-water mark of Lake Timiskaming to the place of beginning.

SCHEDULE 12 — Residents only

October 1, 1962 to January 3, 1963.

Beginning at a point in Saganaga Lake where the International Boundary between Canada and the United States of America is intersected by the easterly boundary of the Territorial District of Rainy River; thence northerly along that easterly boundary to the northeasterly corner of the said Territorial District of Rainy River; thence westerly along the northerly boundary of that territorial district to the intersection with the 7th Meridian; thence northerly along the 7th Meridian in the Territorial District of Kenora to the intersection with the southerly boundary of the geographic Township of MacNicol; thence easterly along the southerly boundaries of the geographic townships of MacNicol, Tustin and Bridges to the southwesterly corner of the geographic Township of Docker; thence in a northerly direction along the westerly boundaries of the geographic townships of Docker and Smellie to the northwesterly corner of the last-mentioned geographic township; thence northerly along the northerly production of the westerly boundary of the geographic Township of Smellie to the intersection with the centre line of the right of way of the most northerly east-west line of the Canadian National Railways; thence westerly along that centre line to the intersection with the boundary between Ontario and Manitoba; thence southerly along that boundary to the intersection with the International Boundary between Canada and the United States of America; thence southeasterly along that international boundary to the intersection with the boundary between the territorial districts of Kenora and Rainy River; thence easterly along the northerly boundary of the Territorial District of Rainy River 15 miles, more or less, to the intersection with the easterly shore of the Lake of the Woods; thence northeasterly along that easterly shore to the intersection with the northerly limit of Concession II in the geographic Township of Morson in the Territorial District of Rainy River; thence easterly

along that northerly limit to the intersection with the easterly boundary of the geographic Township of Morson; thence southerly along that easterly boundary to the southeasterly corner of that geographic township; thence easterly along the northerly boundaries of the geographic townships of Dewart, Rowe and Menary to the northeasterly corner of the last-mentioned geographic township; thence southerly along the easterly boundary of the geographic Township of Menary to the southeasterly corner thereof; thence easterly along the northerly boundaries of the geographic townships of Potts and Fleming to the intersection with the centre line of the waters of Burditt Lake; thence in a southeasterly direction along that centre line to and along the centre line of the channel of the Manomin River to the intersection with the westerly limit of Indian Reserve No. 17B; thence northerly along that westerly limit to the northwesterly corner of that Indian reserve; thence easterly along the northerly limit of that Indian reserve to the northeasterly corner thereof; thence southerly along the easterly limit of that Indian reserve to the intersection with the centre line of the waters of Manomin Lake; thence in a northeasterly and easterly direction following that centre line to and along the centre line of the body of water connecting Manomin Lake and Lake Despair to the centre line of the last-mentioned lake; thence in a northeasterly and northerly direction following the centre line of the waters of Lake Despair to the intersection with the westerly production of the centre of the channel of a stream between Lake Despair and Footprint Lake; thence in a northeasterly direction following that westerly production and the centre line of that stream and its easterly production to the intersection with the centre line of the waters of Footprint Lake; thence in a general southeasterly direction following the centre line of the last-mentioned waters to the intersection with the northerly limit of Indian Reserve No. 17A; thence easterly along that northerly limit to the northeasterly corner of said Indian Reserve No. 17A; thence southerly along the easterly limit of that Indian reserve to the high-water mark of Northwest Bay of Rainy Lake; thence southeasterly in a straight line to the intersection with the centre line of the channel of Camp Narrows; thence in a southeasterly direction following the last-mentioned centre line to the intersection of the centre line of the waters lying adjacent to and northerly of Shelter Bay, Browns Inlet and the most northeasterly point of the geographic Township of Griesinger; thence in a southeasterly and northeasterly direction following the centre line of the last-mentioned waters to the mid-point of the waters lying between Hangingstone Point on the most northeasterly point of the geographic Township of Griesinger and the small island lying northeasterly thereof and patented as locations G 113 and G 114; thence southeasterly in a straight line to the most southwesterly projection of Tug Point on Cheery Island in Rainy Lake; thence south astronomically to the intersection with the International Boundary between Canada and the United States of America; thence easterly, southerly and southeasterly following that international boundary through Rainy Lake and the several lakes, rivers and portages to the place of beginning.

SCHEDULE 13 — Residents only

November 5 to November 17, 1962.

1. The Territorial District of Parry Sound.

2. The Territorial District of Muskoka except those parts of the geographic townships of Medora and Wood lying east of the centre line of the right of way of the Canadian National Railways and north of the line between Concessions XV and XVI in the geographic Township of Wood.

3. The part of the Territorial District of Nipissing lying southerly of a line described as follows:

Beginning at the intersection of the westerly boundary of the territorial district with the centre line of that part of the King's Highway known as No. 17; thence easterly along that centre line to its intersection in the Town of Mattawa with the centre line of the right of way of the Canadian Pacific Railway Company; thence northerly along that right of way to the easterly boundary of the territorial district.

4. The part of the Territorial District of Sudbury lying southerly of that part of the King's Highway known as No. 17.

5. The part of the Territorial District of Algoma lying southerly and southeasterly of the part of the King's Highway known as No. 17 between the westerly boundary of the geographic Township of Spragge and the easterly boundary of the territorial district.

6. The Territorial District of Manitoulin.

7. The Provisional County of Haliburton.

8. The County of Renfrew.

9. The townships of Mara and Rama in the County of Ontario.

10. The Township of Somerville and those parts of the townships of Dalton and Laxton, Digby and Longford lying north of the Monk Road in the County of Victoria.

11. Those parts of the counties of Frontenac, Hastings, Lennox and Addington, and Peterborough lying north of that part of the King's Highway known as No. 7.

(Shotguns only permitted in the Townships of Ennismore, Smith, Douro, North Monaghan, Otonabee and Asphodel in the County of Peterborough)

12. That part of the County of Lanark lying northerly and easterly of a line described as follows:

Beginning at the intersection of the westerly boundary of the county and the centre line of that part of the King's Highway known as No. 7; thence easterly along that centre line to its intersection with the centre line of that part of the King's Highway known as No. 43; thence easterly along that centre line to the intersection with the centre line of that part of the King's Highway known as No. 29; thence southerly along that centre line to the southerly boundary of the county; thence easterly to the easterly boundary of the county.

SCHEDULE 5 — Residents only

November 19 to November 24, 1962 (No dogs).

The geographic townships of Hilton, Jocelyn and St. Joseph in the Territorial District of Algoma.

SCHEDULE 1 — Residents and Non-Residents

September 24 to September 30, 1962 (Bows and Arrows only)

October 1 to January 3, 1962.

Beginning at the southeasterly corner of the Territorial District of Kenora; thence northerly along the easterly boundary of that territorial district to the intersection with the middle of the main channel of Lake St. Joseph; thence northerly along the northerly production of the easterly boundary of the Territorial District of Kenora to the intersection with the 11th Base Line; thence westerly along the 11th Base Line to the intersection with the boundary between Ontario and Manitoba; thence southerly along that boundary to the intersection with the southerly boundary of the Territorial District of Kenora; thence easterly along that southerly boundary to the place of beginning.

SCHEDULE 2 — Residents and Non-Residents

October 1 to December 15, 1962.

That part of Ontario, except the parts described in schedules 1 and 3, lying north of a line described as follows:

Beginning at a point in the northerly shore of Lake Timiskaming, being at the easterly boundary of the geographic Township of Harris; thence in a westerly, southerly, northerly and westerly direction along that northerly shore to the intersection with the southerly boundary of the geographic Township of Dymond; thence westerly along the southerly boundaries of the geographic townships of Dymond, Hudson, Lundy, Auld, Speight, Banks and Wallis to the southwesterly corner of the last-mentioned geographic township; thence southerly along the easterly boundary of the geographic townships of Brewster and Gamble to the southeasterly corner of the last-mentioned geographic township; thence westerly along the southerly boundary of the geographic Township of Gamble to the southwesterly corner thereof; thence southerly along the easterly boundary of the geographic Township of Ellis in the Territorial District of Sudbury to the southeasterly corner thereof; thence westerly along the southerly boundaries of the geographic townships of Ellis, McLeod, Stull, Unwin, Hodgetts, Beulah, Blewett, Brebeuf, Paudash, Chalet, Tp. 9, Margaret, Elizabeth, Abney, Hubbard, Tp. 8Z, Tp. 8A, Tp. 8B, Tp. 8C, Tp. 8D, Tp. 8E, Tp. 8F, Tp. 8G, Tp. 8H, Tp. 22, Range 15, and Tp. 23, Range 15, to the southwesterly corner of the last-mentioned geographic township; thence southerly along the easterly boundary of geographic Township Tp. 24, Range 15 in the Territorial District of Algoma to the southeasterly corner thereof; thence westerly along the southerly boundaries of the geographic townships Tp. 24, Range 15, Tp. 25, Range 15, Tp. 26, Range 15, Home, Tp. 28, Range 15, Tp. 29, Range 15, to the southwesterly corner of the last-mentioned township; thence west astronomically to the International Boundary between Canada and the United States of America; thence in a general northwesterly direction along that international boundary to the intersection with the boundary between Ontario and Manitoba.

SCHEDULE 3 — Residents and Non-Residents

November 1 to December 5, 1962.

Beginning at the intersection of the International Boundary between Canada and the United States of America with the boundary between the territorial districts of Kenora and Rainy River; thence easterly along the northerly boundary of the Territorial District of Rainy River 15 miles, more or less, to the intersection with the easterly shore of the Lake of the Woods; thence northeasterly along that easterly shore to the intersection with the northerly limit of Concession II in the geographic Township of Morson in the Territorial District of Rainy River; thence easterly along that northerly limit to the intersection with the easterly boundary of the geographic Township of Morson; thence southerly along that easterly boundary to the southeasterly corner of that geographic township; thence easterly along the northerly boundaries of the geographic townships of Dewart, Rowe and Menary to the northeasterly corner of the last-mentioned geographic township; thence southerly along the easterly boundary of the geographic Township of Menary to the southeasterly corner thereof; thence easterly along the northerly boundaries of the geographic townships of Potts and Fleming to the intersection with the centre line of the waters of Burditt Lake; thence in a southeasterly direction along that centre line to and along the centre line of the channel of the Manomin River to the intersection with the westerly limit of Indian Reserve No. 17B; thence northerly along that westerly limit to the northwesterly corner of that Indian reserve; thence easterly along the northerly limit of that Indian reserve to the northeasterly corner thereof; thence southerly along the easterly limit of that Indian reserve to the intersection with the centre line of the waters of Manomin Lake; thence in a northeasterly and easterly direction following that centre line to and along the centre line of the body of water connecting Manomin Lake and Lake Despair to the centre line of the last-mentioned lake; thence in a northeasterly and northerly direction following the centre line of the waters of Lake Despair to the intersection with the westerly production of the centre of the channel of a stream between Lake Despair and Footprint Lake; thence in a northeasterly direction following that westerly production and the centre line of that stream and its easterly production to the intersection with the centre line of the waters of Footprint Lake; thence in a general southeasterly direction following the centre line of the last-mentioned waters to the intersection with the northerly limit of Indian Reserve No. 17A; thence easterly along that northerly limit to the northeasterly corner of that Indian reserve; thence southerly along the easterly limit of that Indian reserve to the high-water mark of Northwest Bay of Rainy Lake; thence southeasterly in a straight line to the intersection with the centre line of the channel of Camp Narrows; thence in a southeasterly direction following the last-mentioned centre line to the intersection of the centre line of the waters lying adjacent to and northerly of Shelter Bay, Browns Inlet and the most northeasterly point of the geographic Township of Griesinger; thence in a southeasterly and northeasterly direction following the centre line of the last-mentioned waters to the mid-point of the waters lying between Hangingstone Point on the most northeasterly point of the geographic Township of Griesinger and the small island lying northeasterly thereof and patented as locations G 113 and G 114; thence southeasterly in a straight line to the most southwesterly projection of Tug Point on Cheery Island in Rainy Lake; thence south astronomically to the intersection with the International Boundary between Canada and the United States of America; thence in a southwesterly and northwesterly direction along that international boundary to the place of beginning.

SCHEDULE 4 — Residents and Non-Residents

November 5 to November 17, 1962.

1. The parts of the territorial districts of Algoma, Sudbury and Timiskaming lying southerly of the line described in schedule 2.

2. The Territorial District of Parry Sound.

3. The Territorial District of Muskoka except those parts of the geographic townships of Medora and Wood lying east of the centre line of the right of way of the Canadian National Railways and north of the line between Concessions XV and XVI in the geographic Township of Wood.

4. The Territorial District of Nipissing.

5. The Territorial District of Manitoulin.

6. The Provisional County of Haliburton.

7. The County of Renfrew.

8. The townships of Rama and Mara in the County of Ontario.

9. The Township of Somerville and those parts of the townships of Dalton and Laxton, Digby and Longford lying north of the Monk Road in the County of Victoria.

10. Those parts of the counties of Frontenac, Hastings, Lennox and Addington and Peterborough lying north of that part of the King's Highway known as No. 7.

11. That part of the County of Lanark lying northerly and easterly of a line described as follows:

Beginning at the intersection of the westerly boundary of the county and the centre line of that part of the King's Highway known as No. 7; thence easterly along that centre line to the intersection with the centre line of that part of the King's Highway known as No. 43; hence easterly along that centre line to the intersection with the centre line of that part of the King's Highway known as No. 29; thence southerly along that centre line to the southerly boundary of the county; thence easterly to the easterly boundary of the county.

SCHEDULE 5 — Residents and Non-Residents

November 12 to November 17, 1962 (No dogs).

The geographic townships of Hilton, Jocelyn and St. Joseph in the Territorial District of Algoma.

SCHEDULE 6 — Residents and Non-Residents

November 5 to November 10, 1962.

1. The County of Bruce (No dogs).

2. That part of the County of Carleton lying west of the Rideau River.

3. Those parts of the counties of Frontenac, Hastings and Lennox and Addington lying between that part of the King's Highway known as No. 7 and that part of the King's Highway known as No. 2.

4. That part of the County of Peterborough lying south of that part of the King's Highway known as No. 7. (Shotguns only in North Monaghan, Otonabee and Asphodel Townships.)

5. That part of the County of Lanark lying southerly and westerly of the line described in paragraph 11 of Schedule 4.

6. That part of the County of Leeds lying westerly and northerly of a line described as follows:

Beginning at the intersection of the production southerly of the centre line of that part of the King's Highway known as No. 32 and the International Boundary between Canada and the United States of America; thence northerly along that production and that centre line to the intersection with the centre line of that part of the King's Highway known as No. 15; thence northerly along that centre line to the intersection with the centre line of that part of the King's Highway known as No. 42; thence westerly along that centre line to the intersection with the production southerly of the centre line of the County Road known as Narrow Locks Road; thence northerly along that production and that centre line to the easterly boundary of the county.

SCHEDULE 7 — Residents and Non-Residents

November 5 to November 8, 1962 (Shotguns only).

1. That part of the County of Carleton lying east of the Rideau River.
2. The counties of Grenville, Prescott and Russell.
3. The United Counties of Stormont, Dundas and Glengarry (No dogs).
4. The County of Leeds except that part described in paragraph 6 of schedule 6.

SCHEDULE 8 — Residents and Non-Residents

October 22 to November 3, 1962 (Bows and arrows only).

1. The islands in the Territorial District of Manitoulin excepting therefrom those islands known as Cockburn and Philip Edward (No dogs).

2. The townships of Eastnor and St. Edmunds in the County of Bruce (No dogs).

3. In the Township of Oxford in the County of Grenville and described as follows:

Beginning at the southwesterly angle of Lot 27 in Concession I; thence northerly along the westerly limit of that lot to the intersection with the production westerly of the southerly limit of the travelled road along the southerly limit of a golf course occupying the northerly part of Lot 27 in Concession I; thence easterly along that production and the southerly limit of that travelled road to the easterly limit of said Lot 27; thence northerly along the easterly limit of that lot to the northerly limit of a plan registered in the Registry Office for the County of Grenville as No. 16 for the Township of Oxford; thence easterly along the northerly limit of that plan to the line between the east and west halves of Lot 28 in Concession I; thence northerly along that line to a point therein distant 166 feet measured southerly thereon from the high-water mark on the southerly shore of the Rideau River and Rideau Canal; thence easterly and perpendicular to the

line between the east and west halves of Lot 28 a distance of 450 feet; thence northerly parallel to the line between the east and west halves of Lot 28 to the high-water mark on the southerly shore of the Rideau River and Rideau Canal; thence in a general easterly direction following that high-water mark to a point therein distant 300 feet measured easterly and perpendicular to the westerly limit of Lot 29 in Concession I; thence southerly and parallel to the westerly limit of Lot 29 a distance of 120 feet; thence easterly and perpendicular to the westerly limit of Lot 29 a distance of 120 feet; thence northerly and parallel to the westerly limit of Lot 29 a distance of 120 feet, more or less, to the high-water mark along the southerly shore of the Rideau River and Rideau Canal; thence in a general easterly direction to the intersection with a line drawn parallel to the line between the east and west halves of Lot 29 in Concession I; thence southerly along that parallel line to a point distant 150 feet measured westerly and perpendicular to the line between the east and west halves of Lot 29 from a point therein distant 150 feet measured southerly thereon from the high-water mark on the southerly shore of the Rideau River and Rideau Canal; thence easterly and perpendicular to the line between the east and west halves of Lot 29 a distance of 250 feet; thence northerly parallel to the line between the east and west halves of Lot 29 to the intersection with the high-water mark on the southerly shore of Rideau River and Rideau Canal; thence in a general easterly direction following that high-water mark to the confluence with the high-water mark on the westerly shore of Kemptville Creek; thence in a general southerly direction following that high-water mark to the intersection with the northwesterly limit of the southeasterly 100 acres of Lot 30 in Concession I; thence westerly along that limit to a point in the easterly limit of Lot 29 in Concession I; thence southerly along that limit to the intersection with the high-water mark on the westerly shore of Kemptville Creek; thence in a general southerly direction following that high-water mark to the intersection with the southerly limit of Lot 28 in Concession II; thence westerly along the southerly limit of Lots 28 and 27 to the southeasterly angle of Lot 26 in Concession II; thence northerly along the easterly limit of that lot 540 feet; thence westerly in a straight line to a point in the easterly limit of that part of the King's Highway known as No. 16 and which said point is distant 499 feet measured northerly along that limit from the southerly limit of Lot 26; thence northerly along the easterly limit of that highway to the line between Concessions I and II; thence westerly along the line between Concessions I and II to the place of beginning.

SCHEDULE 18 — Residents and Non-Residents

November 1 to December 31, 1962.

That part of the Township of Keppel in the County of Grey known as Griffiths Island.

SCHEDULE 19 — Residents and Non-Residents

November 5 to November 10, 1962.

The island in Lake Ontario east of the Township of South Marysburgh in the County of Prince Edward known as Main Duck Island.

SCHEDULE 20 — Residents and Non-Residents

November 5 to November 7, 1962.

That part of the Township of Matchedash in the County of Simcoe, composed of:

- (a) lots 20 to 23, both inclusive, in Concession II;
- (b) lots 19 to 27, both inclusive, in Concession III;
- (c) lots 15 to 27, both inclusive, in Concession IV;
- (d) lots 17 to 27, both inclusive, in Concession V;
- (e) lots 15 to 26, both inclusive, in Concession VI;
- (f) lots 9 to 21, both inclusive, in Concession VII;
- (g) lots 3 to 18, both inclusive, in Concession VIII;
- (h) lots 1 to 16, both inclusive, in Concession IX;
- (i) lots 1 to 11, both inclusive, in Concession X;
- (j) lots 1 to 10, both inclusive, in Concession XI;
- (k) lots 1 to 8, both inclusive, in Concession XII; and
- (l) lots 1 to 4, both inclusive, in Concession XIII.

SCHEDULE 21 — Residents only (No dogs).

November 5 to November 7, 1962.

1. The County of Grey.
2. The counties of Brant, Durham, Haldimand, Huron, Kent, Lambton, Northumberland, Oxford, Waterloo, Welland and Wentworth (Shotguns only).
3. Those parts of the counties of Frontenac and Hastings lying south of that part of the King's Highway known as No. 2 (Shotguns only).

CARIBOU

No open season.

BEAR

September 1, 1962, to June 29, 1963 — Throughout Ontario.

HUNGARIAN PARTRIDGE

October 6 to December 15, 1962 — In the counties of Brant, Bruce, Dufferin, Elgin, Essex, Grey, Haldimand, Halton, Huron, Kent, Lambton, Lincoln, Middlesex, Norfolk, Oxford, Perth, Waterloo, Welland, Wellington and Wentworth.

September 22 to November 24, 1962 — In any other part of Ontario.

Bag Limit — 8 per day. Possession Limit — 16.

PHEASANTS — 8:00 a.m. - 5:00 p.m.

1. October 17 to November 3, 1962 — In the counties of Brant, Bruce, Dufferin, Elgin, Grey, Haldimand, Halton, Huron, Kent, Lambton, Middlesex, Norfolk, Oxford, Perth, Simcoe, Waterloo, Wellington and Wentworth;

2. October 17 to October 27, 1962 — In the counties of Peel and York and the townships of East Whitby, Pickering, Reach, Scott, Uxbridge and Whitby in the County of Ontario;

3. October 27 to November 10, 1962 — In the counties of Lincoln and Welland;

4. October 27 to November 3, 1962 — In the County of Essex, except the Township of Pelee;

5. October 6 to October 27, 1962 — In any part of Ontario except the Township of Pelee in the County of Essex and the areas described in items 1, 2, 3 and 4.

Bag Limit — 3 per day, not more than one of which shall be a hen.

6. October 24 and 25, 1962 — In the Township of Pelee in the County of Essex.

Bag Limit — 8 cocks and 2 hens.

RUFFED GROUSE, SHARPTAILED GROUSE, SPRUCE PARTRIDGE AND PTARMIGAN

1. September 15, 1962 to March 31, 1963 —
Sharptailed Grouse and Ptarmigan;

September 15 to December 15, 1962 —
Ruffed Grouse and Spruce Grouse

In the Territorial Districts of Cochrane and Timiskaming, and the portion of the Territorial District of Kenora lying north of the 11th Base Line;

2. September 15 to December 15, 1962 — All Species

In the remainder of northern Ontario, north of the northern boundary of schedule 4 for deer;

3. September 15 to November 24, 1962 — All Species

In the area south of the northern boundary of schedule 4 for deer and north of the French and Mattawa Rivers, including the Territorial District of Manitoulin;

4. September 22 to December 15, 1962 — All Species

In the area south of the French and Mattawa Rivers and north and east of a line following the western boundaries of the Counties of Simcoe and Peel, but excluding the Townships of Clarke and Darlington in the County of Durham;

5. October 6 to December 15, 1962 — All Species

In the remainder of Ontario.

Bag Limit — Ruffed Grouse and Spruce Grouse — 5 per day. Possession — 15
— Sharptailed Grouse — 5 per day. Possession — 15
— Ptarmigan — 5 per day. Possession — 15.

BOBWHITE QUAIL

October 31, 1962, only — In the township of Raleigh, in the County of Kent.

Bag Limit — 5. Possession Limit — 5.

RABBIT

1. December 24, 1962 to February 28, 1963 — In the Township of Pelee, in the County of Essex;

2. October 27, 1962 to February 28, 1963 — In the Counties of Lincoln, Welland and Essex, except the Township of Pelee;

3. October 17, 1962 to February 28, 1963 — In the Counties of Elgin, Haldimand, Kent, Lambton, Middlesex, Norfolk, Oxford, Brant, Wentworth, Dufferin, Wellington, Perth, Waterloo, Halton, York, and Peel; Townships of East Whitby, Pickering, Uxbridge, Reach and Scott in the County of Ontario; Townships of Adjala, Tecumseh, West Gwillimbury, Tosorontio, Essa, Innisfil in the County of Simcoe;

4. October 6, 1962 to February 28, 1963 — In the Townships of Clarke and Darlington in the County of Durham;

5. September 1, 1962 to March 31, 1963 — In the remainder of Ontario.
Bag Limit on cottontail rabbits only — 6 per day.

SQUIRRELS (BLACK, GREY, FOX)

1. October 27 to December 15, 1962 — In the County of Essex;

2. October 6 to December 15, 1962 — In the Counties of Kent, Lambton, Elgin, Middlesex, Norfolk, Oxford, Haldimand, Brant, Welland, Lincoln, Wentworth, Halton, Wellington, Waterloo, Perth, Huron, Bruce, Grey and Dufferin; and the Townships of Darlington and Clarke in Durham County;

3. September 22 to December 15, 1962 — In the remainder of Ontario.
Bag Limit — 10 per day. Possession Limit — 10.

RACCOON AND FOX

September 1, 1962 to August 31, 1963 — Throughout Ontario.

MIGRATORY BIRDS

DUCKS, RAILS, COOTS, GALLINULES, WILSON'S SNIFE, GEESE, WOODCOCK

September 15 to December 16, 1962 — All Species — In the Northern District.

September 22 to December 15, 1962 — All Species — In the Central District.

October 6 to December 15, 1962 — All Species, 11:00 a.m. EST for all species, except Geese and Woodcock — In the Southern District.

October 6 to December 15, 1962 — All Species except Geese, 11:00 a.m. EST for all species except Geese and Woodcock — In Essex County.

November 1 to December 31, 1962 — Geese only — In Essex County.

The Northern District of Ontario comprises the Territorial Districts of Kenora, Patricia, Rainy River, Thunder Bay, Cochrane, and Timiskaming, and those portions of Algoma, Sudbury, and Nipissing lying northerly of Highway 17 between Mattawa and Spragge, a line from Highway 17 in Spragge to the angle in the International Boundary north of Cockburn Island, and the westerly continuation of the International Boundary.

The Southern District of Ontario comprises the Counties of Brant, Bruce, Dufferin, Elgin, Grey, Haldimand, Halton, Huron, Kent, Lambton, Lincoln, Middlesex, Norfolk, Oxford, Perth, Waterloo, Welland, Wellington, Wentworth.

The Central District of Ontario comprises all that part of the Province which is not included in Essex County or in the Northern and Southern Districts.

Ducks — Bag Limit — 5 per day. Possession Limit — 10, none of which shall be a canvasback or redhead. Not more than two woodducks may be taken in the daily limit. After October 27, two additional scaup or goldeneye may be taken per day. Mergansers are not counted in the daily bag or possession limit.

Geese — Bag Limit — 5 per day. Possession Limit — 10.

Rails, coots and gallinules — Bag Limit — 5 per day. Possession Limit — 10.

Wilson's Snipe — Bag Limit — 8 per day. Possession Limit — 16.

Woodcock — Bag Limit — 8 per day. Possession Limit — 16.

Persons resident more than 25 miles from James Bay may not kill more than 15 geese within 25 miles of James Bay during the 1962 season.

BEAVER

Beaver may be trapped, hunted or possessed in the localities described in,

1. Schedule 1 and in Schedule 2, except those parts of the territorial districts of Cochrane and Kenora described in item 2 —

from October 15, 1962 to April 15, 1963;

2. Those parts of the territorial districts of Cochrane and Kenora adjoining the southerly shore of Hudson Bay and the southerly and westerly shores of James Bay and shown outlined in red on a map filed in the office of the Registrar of Regulations at Toronto as No. 309 —

from October 15, 1962 to May 15, 1963;

3. Schedule 3 — October 15, 1962 to March 31, 1963;

4. Schedules 5, 6, 7, 8 and 9 — November 1, 1962 to March 31, 1963.

FISHER AND MARTEN

Fisher and marten may be trapped, hunted or possessed in the localities described in,

1. Schedule 2 — October 15, 1962 to February 28, 1963;

2. Schedule 4 — October 15, 1962 to January 21, 1963;

3. Schedules 5, 6, 7, 8 and 9 — November 1, 1962 to January 21, 1963

LYNX

Lynx may be trapped, hunted or possessed in any part of Ontario from November 1, 1962 to February 28, 1963.

MINK

Mink may be trapped, hunted or possessed in the localities described in,

1. Schedule 2 — October 15, 1962 to February 28, 1963;

2. Schedule 4 — October 15, 1962 to January 21, 1963;

3. Schedules 5, 6, 7 and 8 — November 1, 1962 to January 21, 1963;

4. Schedule 9 — November 1, 1962 to February 28, 1963.

MUSKRAT

Muskrat may be trapped, hunted or possessed in the localities described in,

1. Schedule 2 — October 15, 1962 to May 31, 1963;
2. Schedule 4 — October 15, 1962 to May 21, 1963;
3. Schedule 5 — November 1, 1962 to April 30, 1963;
4. Schedules 6 and 7 — November 1, 1962 to April 20, 1963;
5. Schedules 8 and 9 — November 1, 1962 to April 15, 1963.

OTTER

Otter may be trapped, hunted or possessed in the localities described in,

1. Schedules 2 and 4 — October 15, 1962 to March 31, 1963;
2. Schedules 5 and 6 and in the townships of Albermarle, Amabel, Eastnor, Lindsay and St. Edmunds in the County of Bruce —
November 1, 1962 to March 31, 1963.

RACCOON

Raccoon may be trapped, hunted or possessed in any part of Ontario from September 1, 1962 to August 31, 1963.

SCHEDULE 1 — Part of the territorial districts of Cochrane, Kenora and Thunder Bay and the Territorial District of Rainy River described as follows:

Beginning at the intersection of the northerly limit of the right of way of the transcontinental line of the Canadian National Railways with the easterly boundary of the Territorial District of Thunder Bay; thence southerly along that easterly boundary to the southwesterly corner of the geographic Township of Flanders in the Territorial District of Algoma; thence west astronomically 10 miles, more or less, to the height of land defining the boundary between the watersheds of James Bay and Lake Superior; thence southerly along that height of land 3 miles, more or less, to the intersection with a height of land defining the boundary between the watersheds of White Otter River and Black River; thence in a general westerly and southwesterly direction along that height of land and the height of land between the watersheds of Pic River and Black River to the confluence of those rivers; thence in a general southerly direction following the easterly shore of the Pic River to the intersection with the easterly shore of Lake Superior; thence south astronomically to the intersection with the boundary between Canada and the United States of America; thence in a northwesterly direction following that boundary to the intersection with the interprovincial boundary between Ontario and Manitoba; thence due north along the last-mentioned boundary to the intersection with the northerly limit of the right of way of the transcontinental line of the Canadian National Railways; thence in an easterly direction following that northerly limit to the point of beginning.

SCHEDULE 2 — That part of Ontario that is north of a line located as follows:

Beginning at the intersection of the northerly limit of the right of way of the transcontinental line of the Canadian National Railways with the westerly

limit of the geographic Township of Rice in the Territorial District of Kenora; thence in an easterly direction following the northerly limit of that right of way to its intersection with the easterly limit of the geographic Township of Sargeant in the Territorial District of Cochrane.

SCHEDULE 3 — The territorial districts of Algoma, Manitoulin, Sudbury and Timiskaming.

— Those parts of the territorial districts of Cochrane and Thunder Bay not included in schedules 1 and 2.

— That part of the Territorial District of Nipissing which is northerly and westerly of a line located as follows:

Beginning at the northwesterly angle of the geographic Township of West Ferris; thence easterly along the northerly boundary of that township to the westerly shore of Trout Lake; thence northerly and easterly along the westerly and northerly shore of that lake and along the northerly shore of the Mattawa River to the boundary between Ontario and Quebec.

SCHEDULE 4 — The territorial districts of Algoma, Manitoulin, Rainy River, Sudbury and Timiskaming.

— Those parts of the territorial districts of Cochrane, Kenora, and Thunder Bay not included in Schedule 2.

— That part of the Territorial District of Nipissing which is northerly and westerly of a line located as follows:

Beginning at the northwesterly angle of the geographic Township of West Ferris; thence easterly along the northerly boundary of that township to the westerly shore of Trout Lake; thence northerly and easterly along the westerly and northerly shore of that lake and along the northerly shore of the Mattawa River to the boundary between Ontario and Quebec.

SCHEDULE 5 — The territorial districts of Muskoka and Parry Sound.

— That part of the Territorial District of Nipissing lying southerly and easterly of the line located in paragraph 3 of schedule 3.

— The Provisional County of Haliburton and the County of Renfrew.

— Those parts of the counties of Frontenac, Hastings, Lennox and Addington, Peterborough and Victoria lying northerly of the centre line of that part of the King's Highway known as No. 7.

— That part of the County of Lanark lying northerly and westerly of a line located as follows:

Beginning at a point in the westerly boundary of the County of Lanark where it is intersected by the centre line of that part of the King's Highway known as No. 7; thence in a general easterly direction along that centre line to the intersection of the centre line of that part of the King's Highway known as No. 15 in the Township of Drummond; thence in a general northeasterly direction along the last-mentioned centre line to the intersection of the centre line of that part of the King's Highway known as No. 29 in the Township of Beckwith; thence in a general northwesterly direction along the last-mentioned centre line to its intersection with the boundary between the counties of Carleton and Renfrew; thence northerly and easterly along the southerly boundary of the last-mentioned county to the boundary between Ontario and Quebec.

Table 1

1962 DEER HUNTER SUCCESS

	Lindsay	Tweed	Kemptville*	Pembroke	Parry Sound	North Bay	Sudbury*	Manitoulin Island	Sault Ste. Marie*	Lake Huron	Bruce Peninsula	Lake Simcoe	Lake Erie	Kenora*	Port Frances*	Sioux Lookout	Port Arthur*
Residents																	
Organized Hunters	2846	2449	2105	797	4122	1181	836	836									
% Hunter Success	29.9	30.6	35.0	31.2	28.8	21.4	34.7	34.7									
Days/Hunter/Deer	16.7	17.3	13.3	16.4	19.0	25.0	15.1	15.1									
Casual Hunters	1169	1017		364	1742	686	1432	1432	1905	1941	1480	571	7882	3024	1206		
% Hunter Success	6.2	9.7		16.5	6.6	8.0	18.1	18.1	10.1	10.7	15.2	23.6	10.3	49.9	49.6		
Days/Hunter/Deer	40.8	29.0		21.8	40.2	26.8	17.3	17.3	—	12.2	23.8	10.9	5.3	14.5	14.6		
Non-Residents																	
Organized Hunters	54	108			127	78	84	84	416								
% Hunter Success	59.3	23.1		Incl. Above	31.5	34.6	48.8	48.8	23.1								
Days/Hunter/Deer	10.1	26.2			17.5	13.6	11.4	11.4	—								
Casual Hunters	6	4			5	4	54	54			4			1079			
% Hunter Success	0	25.0		Incl. Above		25.0	37.0	37.0			0			59.0			
Days/Hunter/Deer	—	17.0				14.0	14.7	14.7			24.0						
Total Hunters Checked	4075	3578	2105	1161	5996	1949	1249	2406	2321	1941	1480	571	7882	4103	1206	877	4190
% Hunter Success	23.5	24.5	35.0	26.6	22.4	17.2	12.7	25.3	11.6	10.7	15.2	23.6	10.3	52.3	49.6	40.5	23.3
Days/Hunter/Deer	18.4	18.9	13.3	17.5	20.8	24.4	20.7	15.7	—	12.2	23.7	10.9	5.3	14.5	14.6	19.3	—

*These districts obtained data from mailed hunter questionnaires and this information cannot be compared on exactly the same basis with the other districts which obtained information from checking stations and from checking hunters in the field.

SCHEDULE 6 — The counties of Carleton, Dundas, Durham, Glengarry, Grenville, Leeds, Northumberland, Prescott, Prince Edward, Russell and Stormont.

— Those parts of the counties of Frontenac, Hastings, Lennox and Addington, Peterborough and Victoria not included in paragraph 4 of schedule 5.

— That part of the County of Lanark not included in paragraph 5 of schedule 5.

SCHEDULE 7 — The counties of Dufferin, Ontario, Peel, Simcoe and York.

SCHEDULE 8 — The counties of Brant, Bruce, Grey, Halton, Huron, Oxford, Perth, Waterloo, Wellington and Wentworth.

SCHEDULE 9 — The counties of Elgin, Essex, Haldimand, Kent, Lambton, Lincoln, Middlesex, Norfolk and Welland.

GAME MANAGEMENT, 1962

The 1962 Deer Hunt In Ontario

The whitetailed deer is unquestionably the most important big game animal in North America. One or more of the whitetail's thirty subspecies is found in almost every state and province; while civilization has pushed other big game species into wilderness beyond the reach of many hunters, the whitetail thrives within a few miles of metropolitan areas. Deer are Mr. Average Hunter's big game and in 1961 almost 112,000 licences were sold to Ontario's deer hunters. This compares with small game licence sales of just over 350,000 and since it is likely that many hunters held both types of licences, it is evident that a large proportion of Ontario's hunters pursue the whitetail.

The Province's annual deer harvest is estimated at 30,000 animals, about one deer for every four hunters. Although this is a large quantity of venison, it is only a very small proportion of the annual harvest taken by the over six million deer hunters in the United States and Canada. Ontario is, in fact, at the northern edge of the continent's deer range and much of northern Ontario does not support huntable densities of deer.

Weather, in several ways, plays a very important role in determining whether the hunter brings home his venison in the fall. Severe winter conditions reduce deer populations drastically, especially along the northern "fringe" of Ontario's range. At the same time, weather during the hunting season determines in large part whether the hunter is given an opportunity to harvest the deer which are available.

Weather of both types mentioned above greatly influenced results of the 1962 deer hunt and because conditions vary so widely across the province, each District will be treated in turn.

Sioux Lookout, Kenora and Fort Frances Districts, in the Western Region, again enjoyed the best deer hunting the province had to offer, with success rates for these Districts at 40.5, 52.3 and 49.6% respectively. (See Table 1) Mild winters for the past few years have resulted in bumper crops of deer in this region,

Table 2
INFORMATION SUMMARIZED FROM
DEER CAMP REPORTS AND RESIDENT DEER HUNTERS, 1960 - 1962

	PARRY SOUND			LINDSAY			TWEED			PEMBROKE			KEMPTVILLE*		
	1960	1961	1962	1960	1961	1962	1960	1961	1962	1960	1961	1962	1960	1961	1962
Hunter Success	43.6	39.8	39.6	47.0	48.9	50.1	48.4	40.1	47.8	36.1	26.1	42.0	37.6	36.9	35.0
Days/Deer	13.6	15.2	14.6	13.6	12.6	11.5	13.3	15.5	11.8	17.5	23.4	14.1	15.2	15.9	13.3
No. of Camps Reporting	173	247	371	171	171	361	217	304	354	247	249	235	211	252	254
Total Hunters	1730	2296	3524	1508	1458	3513	1606	2380	2803	1891	1899	1705	1624	1850	2105
Ave. No. Hunters Per Camp	10.0	9.3	9.5	8.8	8.5	9.7	7.4	7.8	7.9	7.7	7.1	7.3	7.7	7.4	8.3

*Although many hunters do not operate from hunt camps, many parties contain a high proportion of rural residents, and the same areas are hunted year after year.

although adverse weather during the hunting season lowered success slightly in Kenora and Fort Frances from the very high success enjoyed last year.

In Port Arthur District, an increasing deer herd is reflected in a significant increase in deer licence sales this year. A mailed survey of hunters indicated that 4,190 licencees took 976 deer — a success rate of 23.3%. This is higher than last year's figure of 20.5%, calculated on the same basis.

Along the northern margin of the "eastern" deer range from Sault Ste. Marie to North Bay, deer herds showed signs of slow recovery from the very severe losses sustained during the winters of 1958-59 and 1959-60. North Bay District showed the greatest gains and hunter success rose to 17.2% from a low 8.3% in 1961. Fawns comprised 38.7% of the North Bay kill, indicating excellent reproduction.

On the Sudbury District mainland (excluding Manitoulin Island), hunter success at 12.7% was still low, but better than in 1961. A high percentage of young deer in the kill suggests an increasing population. (See Table 3)

In the Sault Ste. Marie area, bridge checks and hunter questionnaires were used to obtain harvest information. District staff feel that the shorter season, lack of snow cover during the season and fewer hunters combined to reduce the number of deer taken. Success for residents was 10.1%, compared to last year's 17.1%. It is evident that the Sault deer herd is still at a low level, although the 338 hunters who hunted from camps had a success rate of 48.5%; this, however, was also a slight reduction from the success of camps in 1961.

On Manitoulin Island, Sudbury District staff operated a checking station at Little Current twenty-four hours a day during and subsequent to the season. Hunter success rose from 21.2% to 25.3% this year. Fawns comprised 35.2% of all deer taken, indicating excellent reproduction. Better hunting was reflected in the number of man-days of effort required to bag a deer — 15.7 compared to 18.0 in 1961.

South of the French and Mattawa Rivers, in the heart of the main eastern deer range, weather during the hunt influenced the harvest considerably.

In Parry Sound, District staff examined 1,854 deer which passed through their checking stations. Results of these checks indicated a hunter success rate of 22.4%, down slightly from the 23.7% recorded in 1961. We believe actual success was better than this, since heavy rains on Saturday, November 10, almost "washed" out checking station operations. Reports from hunt camps are a more reliable indication of success and Table 2 shows little change in Parry Sound camps from 1961 to 1962. Weather during the first week was only fair, that of the second week excellent. Had this been reversed, the much heavier hunting pressure which occurs the first week would have undoubtedly increased the kill. Several aspects of the hunt were encouraging; fawns increased from 30 to 33% of all deer checked and yearlings, as a percentage of all adults, rose from 27.3 to 34.9%. Crops of strong young age-classes such as these show that the Parry Sound herd is recovering from the effect of previous harsh winters.

Deer hunting in Lindsay District was much improved. Table 2 shows that reports from 361 camps comprising 3,513 hunters indicated 50.1% success; this is the highest since 1958. Results from Lindsay checking stations indicate (Table 1) a reduction from 25.4% in 1961 to 23.5% this year. Again, the operation of check stations suffered from the torrential all day rain during Saturday of the first weekend. Results were also biased by the fact that mild weather during the first week forced many hunters to take out their deer early. These deer were then missed during the weekend road checks. For one or both of the above reasons, the information contained in Table 1 is not as reliable as deer camp data in Table

Table 3

1962 DEER AGE DISTRIBUTION IN PERCENT

Age	Lindsay	Tweed	Kemptville	Pembroke	Parry Sound	North Bay	Sudbury	Mantoulin Island	Sault Ste. Marie	Lake Huron Bruce Peninsula	Lake Simcoe	Lake Erie	Kenora	Fort Frances
1½	36.5	37.5	38.6	26.8	34.9	32.7	43.1	47.1	25.3	19.2	28.3	29.6	38.2	22.4
2½	18.9	15.8	16.3	8.8	17.1	12.3	9.0	17.1	20.5	21.6	20.0	30.7	17.6	40.3
3½	23.6	21.2	22.3	24.6	20.1	21.6	18.0	20.3	16.9	28.8	21.7	20.8	21.3	10.4
4½	10.8	14.3	14.4	23.1	16.8	15.4	11.3	7.6	12.0	17.6	18.3	10.9	11.0	9.0
5½	5.5	7.6	5.7	9.0	6.0	9.9	9.0	2.6	13.3	8.0	10.0	4.3	7.4	11.9
6½	3.0	3.1	1.1	4.1	3.5	6.2	9.0	5.3	10.8	4.8	1.7	2.1	2.9	4.5
7½	1.7	0.4	1.6	1.2	1.2	1.9	0	0	1.2	0	0	2.1	1.5	1.5
Total Adults	517	448	453	531	1056	162	44	340	84	125	60	91	136	67
Total Fawns	326	311	300	190	611	132	34	229	32	74	40	55	85	28
Total Unaged	229	156	25	0	187	47	15	82	1	21	27	52	164	17
Grand Total	1072	915	778	721	1854	341	93	651	117	220	127	198	385	112
% Bucks	35.2	36.0	28.8	29.4	32.0	26.1	24.7	36.6	48.1	33.6	31.5	37.8	38.7	53.6
% Does	34.4	30.1	32.6	44.2	35.0	35.2	38.8	28.3	24.5	32.7	37.0	34.8	39.2	21.4
% Fawns	30.4	34.0	38.6	26.4	32.9	38.7	36.5	35.2	27.4	33.6	31.5	27.3	22.1	25.0
Ave. Age Adults	3.0	3.0	2.9	3.6	3.1	3.3	3.1	2.7	3.5	3.4	3.2	2.9	3.0	3.2

2 for the main deer districts south of the French and Mattawa Rivers.

Tweed District was blessed with a three-inch fall of snow which provided excellent hunting conditions for the first three days of the season. Since the snow was crusty, it was difficult for deer to move without detection and the kill during these three days represented 56.9% of all deer harvested. Success as tabulated at checking stations was 24.5%, up 4% from 1961. Success as reported by the 354 co-operating hunt camps was 47.8%, a healthy gain from the 40.1% reported last year. Weather and a good fawn crop produced good hunting throughout most of the Tweed District. Fawns comprised 34% of all deer checked; this was the highest percentage of fawns checked since 1955, and an increase of almost 5% over last year.

In Pembroke, most hunters coming through the checking station wore broad smiles, and complaints concerning the hunt were few and far between. Again, sportsmen could thank the weatherman. Up to 5 inches of snow fell prior to the season and remained in most areas during the first week of the hunt. Some areas had snow into the second week. Hunter success as measured at checking stations was 26.6%, up a full 8.5% from 1961. Hunt camp reports indicated a 42% average success, a startling change from the 26.1% recorded last year.

Kemptville District's success rate once again was higher than in most southern Ontario districts, although the 35.0% success reported by 254 "camps" was slightly lower than last year. Less effort was required to take a deer this year, however — 13.3 man-days of hunting opposed to 15.9 days last year.

In Lake Simcoe District, in a three-day season on the crown lands of Matchedash Township and in a 12-day season in Baxter, Wood, Rama and Mara Townships, success for the 571 hunters checked was 23.6%. This is a slight gain from 1961's 22.3%.

In Huron District, the regular six-day season prevailed on the Bruce Peninsula. At the Wiarton checking station, 1,480 hunters were interviewed. Hunter success was 15.2%, up slightly from last year's 14.3%. Elsewhere in Huron District, several Counties had a three-day season. Weather was not favourable and this reduced the harvest. Hunter success for the 1,941 sportsmen interviewed was 10.7% with 12.2 days of hunting effort required to take a deer.

In Erie District, four Counties enjoyed a three-day season, after many years of closure. An estimated 7,882 hunters participated and took 818 deer for a success rate of 10.3%. Five and one-third man-days of hunting were required to bag a deer. The weather was good for hunting, hunters were most orderly and few complaints were received from landowners. A substantial proportion of the deer hunters were farmers and the season was a popular one with many landowners.

In Southern Lindsay District, the Counties of Durham and Northumberland were also open for three days. Although poor weather and lack of knowledge concerning the deer runways may have reduced the kill, most hunters and landowners were pleased with the results. One "cornfed" buck, weighing in at 285 lbs. dressed, was taken in Durham and may have been the largest deer taken in Ontario this year.

In Table 3, the age class composition of the deer checked from each district is tabulated. One of the most significant aspects of this table is the low percentage of 2½-year-old deer in the kill. Although, we know that this age class is the most difficult one to age correctly, it is also true that in several districts, the 2½-year-olds were produced after a second consecutive severe winter, e.g. Sudbury, North Bay, Pembroke. It is likely that many fawns failed to survive because malnourished does could not give them proper care. This showed up as lower than normal percentages of yearling deer last year and will be apparent again

Table 2

RESIDENT MOOSE HUNTING, 1962

District	Licences Sold in District	No. Licences in Sample	% Sample Chosen	% of Sample Received	Calculated Licences Used	Calculated Kill of Moose	% Hunter Success	Hunter Days per Moose
Western*								
Sioux Lookout	1132	448	40.0	75.7	1262	544	43.1	12.2
Kenora	1276	510	40.0	84.9	1099	562	51.1	14.3
Port Frances	1018	407	40.0	89.4	780	344	44.1	19.1
Port Arthur	4439	444	10.0	95.0	3757	1246	33.1	19.0
Geraldton	1757	527	30.0	86.0	2807	1067	38.0	16.0
Northern*								
Kapuskasing	3057	611	20.0	90.8	3605	911	25.3	24.9
Cochrane	4214	842	20.0	78.9	3453	708	20.5	—
Central*								
Swastika	3944	778	20.0	90.7	3944	616	15.6	38.6
Gogama	552	552	100.0	95.3	1918	365	19.1	25.5
Chapleau	776	776	100.0	94.5	1295	226	18.3	32.5
White River	1173	459	25.5	90.6	1868	375	20.0	24.4
Sault Ste. Marie	4101	423	10.3	93.2	2716	540	19.9	33.8
Sudbury	4630	463	10.0	90.7	3192	562	17.6	—
North Bay	3197	639	20.0	87.5	1823	279	15.3	—
NORTHERN ONTARIO	35266	7879	22.3	88.4	33519	8345	24.9	—
Correction for licences not sampled	—	—	—	—	435	109	—	—
Corrected Total	—	—	—	—	33954	8454	—	—
Southern*								
Parry Sound	1558	1558	100.0	92.4	1655	437	26.4	25.5
Lindsay	555	555	100.0	94.6	575	143	24.8	25.9
Tweed	345	345	100.0	85.2	172	33	19.4	33.0
Pembroke	345	345	100.0	90.0	448	172	38.4	19.4
Toronto Cash Office	1020	510	50.0	60.7	—	—	—	—
SOUTHERN ONTARIO	3823	3313	86.6	77.4	2850	785	27.5	—
ONTARIO	39089	11192	28.6	85.2	36804	9239	25.1	—

*Moose Management Regions.

next year as a scarcity of 3½-year-olds.

In summary, mild winters have produced good hunting in the western region and future hunting prospects, following a very mild winter in 1962-63, are excellent.

Along the northern limit of the eastern range, herds were gradually recovering. We cannot be too optimistic concerning the 1963 hunt, since the past winter has been very severe, and heavy losses were again incurred particularly in the Sudbury District.

Across the eastern deer range, south of the French and Mattawa Rivers, weather during the hunt was favourable and hunting was good in 1962. Although snow was deep during the winter just past, it was of light density and impeded deer movements very little. Hunting success next fall in the main eastern deer range will depend in large part on weather during the hunt. If we have normal weather conditions, it is quite possible that as a result of the higher than normal kill in 1962, a decrease in hunter success may be experienced.

The 1962 Moose Hunt In Ontario

Moose in Ontario attracted over 46,000 hunters in 1962, and licence sales were the highest on record. There was an indication that the annual large increase in sales was levelling off, however. Total licence sales increased by only 3.1%, compared with a 23.8% increase the previous year. Table No. 1 below shows the trend in licence sales over the past seven years. Since the season was opened in 1951 after a short period of closure, the number of moose hunters afield has increased over thirtyfold from 1400 in 1951 to the present total of 46,145.

Table No. 1

MOOSE LICENCES SOLD IN ONTARIO

	1956	1957	1958	1959	1960	1961	1962
Residents	13440	17369	22688	26349	30340	38977	39470
Non-Residents	1550	1893	2362	3431	4214	5775	6675
Res.-Moose-Deer	900	38	1245	0	1608	0	0
TOTAL	15890	19262	26295	29780	36160	44752	46145

For the fourth consecutive year, District Fish and Wildlife staffs collected information on the hunt by obtaining questionnaires from a systematic sample of moose hunters. Names were taken from licence book covers and hunters were contacted by mail, and in some instances, by telephone. Tables number 2 and 3 show the results of these surveys by Forest District.

Over 13,000 moose were harvested in 1962 by resident and non-resident hunters. Hunting success for residents was 25.1%, while non-residents, always somewhat more successful, enjoyed a success rate of 53.4%. For residents, hunting in northern Ontario, hunting success at 24.9% was very similar to last year's 25.4%. Resident success for southern Ontario is not a true reflection of hunting quality; many deer-moose hunting groups treated the moose licence as a camp licence, and thus hunting success is misleading. The kill in southern Ontario did decline however and there appears to have been fewer moose available to the hunter than in 1961. The total estimated provincial harvest of 13,295

Table 3

NON-RESIDENT MOOSE HUNTING, 1962

District	Licences Sold in District	No. Licences in Sample	% Sample Chosen	% of Sample Received	Calculated Licences Used	Calculated Kill of Moose	% Hunter Success	Hunter Days per Moose
Western*								
Sioux Lookout	917	917	100.0	74.4	1598	1034	64.8	6.8
Kenora	1371	548	40.0	88.7	1604	1086	67.7	9.8
Port Frances	235		data not available					
Port Arthur	911	911	100.0	53.0	941	410	43.6	5.0
Geraldton	395	395	100.0	95.0	680	383	56.3	12.0
Northern*								
Kapuskasing	152	152	100.0	90.1	231	129	55.9	12.7
Cochrane	121	121	100.0	87.6	100	53	52.8	—
Central*								
Swastika	103	103	100.0	66.0	84	30	35.7	11.2
Gogama	130	130	100.0	95.5	193	110	56.9	9.6
Chapleau	247	247	100.0	85.8	408	137	33.5	17.4
White River	574	574	100.0	78.9	784	288	36.7	16.5
Sault Ste. Marie	878	878	100.0	90.0	417	123	29.4	18.3
Sudbury	80	80	100.0	67.5	70	19	27.2	—
North Bay	68	68	100.0	91.1	9	0	0.0	—
Toronto	16							
TOTAL NON-RESIDENTS	6198				7119	3802	53.4	
Correction for Non-Resident licences not available for sampling	477				477	254		
Residents (from Table 2)	39470	11192			36804	9239	25.1	
ONTARIO (Res. & Non-Res.)	46145				44400	13295	30.0	

*Moose Management Regions.

moose compares to a recalculated estimate of 12,689 for 1961 and is undoubtedly the highest kill on record for the Province.

This year the method of obtaining estimates of harvest and hunter success was revised slightly, and for the first time, an accurate estimate of the number of moose taken by those hunters who failed to forward information on their hunt is available. In recent years, studies have been carried out in several districts to compare the success of reporting hunters as opposed to those hunters who failed to forward information on their hunt. The percentage of the total kill which has been reported and the percentage of the sample which has been returned throughout the period in which returns were received have been plotted for those districts obtaining a high proportion of sample returns. These studies indicate that successful hunters are much more apt to contribute information concerning their hunt without prompting while those hunters, delinquent in sending in their reports, are often unsuccessful. For instance, it has been found that approximately 86% of the total harvest has been reported when only 75% of sample returns has been received.

Fortunately, the proportion of successful and unsuccessful moose hunters who report appears to be the same across the Province, and since the bias is a constant one, accurate estimates of the total kill can be made. This is particularly important in those districts which do not get a high percent return of their sample. The kill in these districts has been over-estimated in the past to a degree directly proportional to the percentage of hunters failing to make a return.

To provide the most accurate information, the new method has been used to recalculate resident harvest information for the past three years, 1959 through 1961; this information is contained in Table no. 4

Although all 1962 data have been calculated using the new system, recalculation of non-resident data prior to 1962 is impossible because of previous methods of obtaining this information. For this reason, the statistics concerning the kill and hunter success of non-residents for 1962 can not be compared on the same basis with similar data for previous years.

The best moose hunting the Province has to offer still lies north and west of Lake Superior in the western moose management region. All but one of the districts located from the Manitoba boundary to Geraldton had better resident hunting success in 1962 compared to the previous year. Success fell in Sioux Lookout District in 1962, as the district staff predicted before the season opened. Water levels in the Sioux Lookout District were extremely high, moose watering areas were abundant and thus moose were observed less frequently in the usually exposed locations along the waterways.

Kenora District had the best hunting in the Province for both residents and non-residents with success rates of 51.1 and 67.7% respectively. Fort Frances residents enjoyed 44.1% success while resident success for Port Arthur and Geraldton was 33.1 and 38.0% respectively. Non-resident success for these Districts was somewhat better than for residents as shown in Table no. 3.

Unusually warm weather during the first part of the season made hunting difficult in the northern portions of the Province. Locker plants were filled to capacity and many hunters were hard pressed to save their moose meat; the total kill was undoubtedly lower because of weather conditions; the unseasonable weather also changed the temporal distribution of the kill, particularly that of resident hunters. In Sioux Lookout, 56% of the total kill was taken during the first two weeks in October, compared to 61% obtained in the same period in 1961 and in Kapuskasing District, although the season opened on September 15, only

Table No. 4

RESIDENT MOOSE HUNTERS

Kill and Percent Success, Data Based on Revised Method of Calculating Kill

District	1959		1960		1961		1962	
	Kill	% Success	Kill	% Success	Kill	% Success	Kill	% Success
*Western								
Sioux Lookout -----	369	42.4	492	39.4	813	56.1	544	43.1
Kenora -----	281	36.8	572	47.5	828	46.7	562	51.1
Fort Frances -----	129	45.0	159	27.6	256	39.0	344	44.1
Port Arthur -----	640	30.0	871	29.4	796	23.9	1246	33.1
Geraldton -----	869	31.4	998	32.3	1063	34.9	1067	38.0
*Northern								
Kapuskasing -----	786	31.8	863	31.4	892	28.0	911	25.3
Cochrane -----	341	13.2	601	22.4	471	15.8	708	20.5
*Central								
Swastika -----	407	17.4	470	19.7	533	18.2	616	15.6
Gogama -----	269	19.9	351	23.2	509	22.0	365	19.1
Chapleau -----	200	15.5	318	25.4	452	21.7	226	18.3
White River -----	223	27.2	362	33.0	377	19.9	375	20.0
Sault Ste. Marie ---	445	15.0	475	17.2	670	21.7	540	19.9
Sudbury -----	636	23.0	473	15.4	617	19.3	562	17.6
North Bay -----	295	30.0	426	21.1	439	17.3	279	15.3
NORTHERN ONT.	5890	24.0	7431	25.9	8716	25.4	8345	24.9
*Southern								
Parry Sound -----	No		400	44.5	471	26.4	437	26.4
Lindsay -----	Open		146	45.5	211	30.5	130	24.8
Tweed -----	Season		52	44.8	61	24.0	33	19.4
Pembroke -----			95	66.0	116	31.2	172	38.4
SOUTHERN ONT.**			693		859		772	
PROVINCIAL	5890	24.0	8124	26.9	9575	25.6	9130	25.1
Estimated licences used -----	24481		30144		37526		36801	

*Moose Management Regions.

**High success rate due to party hunting of deer and moose.

11% of the total reported kill was taken during September while 56.5% was taken in the first two weeks of October.

In the northern moose management region, comprising Kapuskasing and Cochrane Forest Districts, non-residents enjoyed better success than in 1961, while 1962 resident success was lower in Kapuskasing and higher in Cochrane.

Further to the south in the central moose management region from White River on the west to North Bay and Sudbury Districts to the south, hunting success for residents fell slightly in 1962. Non-resident success rose in three of the seven districts, however, while it was lower in four of these districts.

In southern Ontario, fewer licences were issued and fewer kills were reported. Because of party hunting, success is difficult to evaluate.

Table No. 4 indicates that resident hunter success across the Province has varied only slightly during the past four years. Gains in hunting success for this period have occurred in northwestern Ontario, and in Cochrane District in the northeast. In Kapuskasing and in many of the districts in northcentral Ontario, success has remained relatively stable or has declined slightly during these four years. Table No. 4 shows that the harvest taken by residents in 1962 declined slightly; this is somewhat misleading and the kill in 1962 probably equalled or exceeded the harvest taken in 1961, since the 1962 estimate of total licences used was over 2,000 short of actual licence sales. Errors inherent in the method used to calculate number of licences used and kill are responsible for this discrepancy.

For seven of the twelve districts opened to non-resident hunting, non-resident hunting success was lower than in 1961. At least some of this difference was due to the new method of calculating kill and hunter success. Gains in non-resident success over those for 1961 were registered by five districts, Kapuskasing, Cochrane, Gogama, White River and Sault Ste. Marie. There is no question that these districts had better non-resident hunting in 1962, since previous figures were overestimated to varying degrees.

The sex and age classification of moose, as reported by hunters, is contained in tables Nos. 5 and 6. In Northern Ontario, every district indicated that hunters had taken more bulls than cows. Resident hunters took 57.7% bulls while non-residents were even more selective, taking 62.3%. These differences are significantly different from a 50-50 sex ratio at the 5% confidence level. It is very likely that the difference from an even sex ratio is due to the preference of hunters for bulls. Evidently there are more trophy hunters among non-residents since the ratio of bulls to cows has been consistently higher for non-residents through the years. This selection for trophy animals also shows up in the proportion of calves in the kill; calves comprised 16.4% of the kill taken by residents in Northern Ontario and a very much lower 10.8% of moose taken by non-residents.

It appears that Southern Ontario moose hunters are not selective, since the percentage of bulls to cows was 47.2 to 52.8. Sample size is small and this difference from an even sex ratio is not statistically significant. In 1961, the proportion of adult bulls to adult cows was 52.0% to 48.0% which was not significantly different from an even sex ratio. It is probable that hunters in Northern Ontario have more opportunity to select their kill while in Southern Ontario, the trend is to take the first moose seen.

Access to hunting areas remains the most serious obstacle to the efficient harvesting of moose in Ontario. Distribution of moose hunters is directly related to the access provided by roads, waterways, and in some instances, railways. Very

Table No. 5

CLASSIFICATION OF RESIDENT MOOSE KILL, 1962

Data Taken From Questionnaires Returned by Moose Hunters

Forest District	No. Moose Reported in Sample	Percent of Total Kill				Bulls & Cows as % of Adults		Calves as % of Total Kill
		Adults		Calves		♂	♀	
		% ♂	% ♀	% ♂	% ♀			
Sioux Lookout -----	174	46.0	37.4	9.2	7.4	55.1	44.9	16.6
Kenora -----	205	42.9	38.1	11.7	7.3	53.0	47.0	19.0
Fort Frances -----	110	41.8	29.1	18.2	10.9	58.9	41.0	29.0
Port Arthur -----	123	51.2	35.0	8.1	5.7	59.4	40.6	13.8
Geraldton -----	264	43.4	37.1	10.6	8.7	53.9	46.1	19.3
Kapuskaing -----	197	49.3	35.6	11.6	3.5	58.0	42.0	15.2
Cochrane -----	130	50.5	39.2	5.3	5.0	56.4	43.6	10.3
Swastika -----	127	52.7	37.8	7.8	1.7	58.3	41.7	9.5
Gogama -----	159	55.4	31.5	6.9	6.2	63.7	36.3	13.2
Chapleau -----	166	50.6	35.5	5.4	8.5	58.7	41.3	13.8
White River -----	113	46.9	32.7	7.0	13.2	58.8	41.2	20.3
Sault Ste. Marie -----	56	51.7	32.1	10.7	5.3	61.7	38.3	16.2
Sudbury -----	68	57.4	27.9	8.8	5.9	67.2	32.8	14.7
North Bay -----	52	44.2	34.6	11.5	9.6	56.0	44.0	21.1
Northern Ontario ----	1944	48.2	35.2	9.4	6.9	57.7	42.3	16.4
Parry Sound -----	336	38.7	38.9	13.7	8.7	49.8	50.2	6.1
Lindsay -----	119	31.1	42.1	11.7	15.1	42.5	57.5	26.8
Tweed -----	31	16.1	54.8	9.6	19.3	22.7	77.3	29.0
Pembroke -----	77	44.1	41.5	5.1	9.3	51.5	48.5	14.2
Southern Ontario ----	568	36.5	40.8	11.7	11.0	47.2	52.8	22.6
ONTARIO -----	2507	45.6	36.4	10.0	7.8	55.5	44.5	17.8

Table No. 6

CLASSIFICATION OF NON-RESIDENT MOOSE KILL, 1962

Data Taken From Questionnaires Returned by Moose Hunters

Forest District	No. Moose Reported in Sample	Percent of Total Kill				Bulls & Cows as % of		Calves as % of Total Kill
		Adults		Calves		♂	♀	
		% ♂	% ♀	% ♂	% ♀			
Kenora -----	419	54.9	32.0	6.7	6.4	63.1	36.9	—
Sioux Lookout -----	728	55.4	35.2	4.3	5.0	61.1	39.9	9.3
Port Arthur -----	352	54.8	33.8	5.7	5.7	61.8	31.2	11.3
Geraldton -----	372	52.2	36.8	5.3	5.6	58.6	41.4	11.0
Kapuskasing -----	120	55.8	32.5	5.0	6.6	63.2	36.8	11.6
Cochrane -----	49	61.2	28.5	8.2	2.1	68.1	31.9	10.2
Swastika -----	24	79.1	20.9	—	—	79.1	20.9	—
Gogama -----	106	55.7	36.7	5.8	1.8	60.2	39.8	7.5
Chapleau -----	128	58.6	29.6	3.9	7.8	66.3	32.7	11.8
White River -----	259	54.8	34.7	5.0	5.4	61.2	38.8	10.4
Sault Ste. Marie -----	106	65.0	27.4	3.8	3.8	70.4	29.6	7.6
Sudbury -----	13	84.6	7.7	7.7	—	91.6	8.4	7.6
North Bay -----	0	None Reported						
Northern Ontario ----	2676	55.6	33.5	5.1	5.7	62.3	37.7	10.8

large areas more difficult of access are hunted extremely lightly. A province-wide census on which statistical tests for accuracy and error were conducted produced an estimated 125,000 moose for the province in 1959. Since then, no significant trends have been noted which would change this estimate to any great degree.

Ontario's moose herd could produce a harvest several times larger than the present kill of about 13,000 animals. Unfortunately, many of these unharvested animals are located in remote areas with little chance that moose and the hunter, travelling by conventional means, will "get together". On the other hand, certain accessible areas are becoming congested with hunters; hunter success suffers and temporary shortages of moose may occur because of overhunting. These moose are usually replaced by an influx of moose from less accessible areas before the next hunting season, however.

To relieve hunter congestion and to increase hunting pressure in those large remote areas where present high densities of moose occur, searching for moose from the air, first initiated in 1961, was permitted in two experimental areas in northwestern Ontario last year. Permits to search for moose from the air were taken out by 421 hunters. Although some of the permittees did not hunt, 316 moose were taken for a hunter success of 79.4%. The average number of moose seen per hunter was 17. Few, if any, of these moose would have been taken had not the special regulation been in effect. The experiment has been a successful one and two large remote areas which contain high density moose populations and which do not contain land or water routes allowing hunters ready access, will be open to aircraft hunting in 1963.

Prospects for the 1963 hunting season are bright and particularly so in the northwestern and northern moose management regions. Weather depressed the kill last year in some areas and if normal weather conditions occur during the first part of the season when the major portion of the hunting is done, the prospects for a successful moose hunt are excellent.

Ruffed Grouse Studies, 1962

During the summer of 1962, District staffs throughout Ontario doubled their effort in counting the number of ruffed grouse young in each brood sighted during the period from May until September. A total of 1,072 broods were counted in eighteen districts, compared to 576 broods counted in 1961. The increase in 1962 was a result of increased efforts placed on this phase of our ruffed grouse studies by the districts. In addition, the increase in numbers might also be a result of a general increase in grouse populations, throughout Ontario.

Table No. 1 summarizes the brood count by district and by month. The brood counts in May are not significant because there are such a small number but it is worth noting that early broods may generally be smaller in size in the districts of Southern Ontario. In all of the districts, except Parry Sound, Sudbury and Kenora, brood size in June was greater than in June, 1961. In July, brood size was greater in all districts of the province except Parry Sound. In August, however, brood size was greater in all districts, except Gogama, Swastika, Port Arthur, Fort Frances, Kenora, Sioux Lookout in comparison to 1961.

Table No. 1

RUFFED GROUSE BROOD COUNT — 1962

	May		June		July		August		September		Total	
	Broods	Yg/♀	Broods	Yg/♀	Broods	Yg/♀	Broods	Yg/♀	Broods	Yg/♀	Broods	Yg/♀
Lake Simcoe	4	6.0	3	6.6	3	8.6	8	7.5	1	6.0	19	7.2
Lindsay	8	6.2	33	7.2	21	6.7	18	6.9	4	8.0	84	6.9
Tweed			16	7.3	32	6.5	29	4.7	4	6.0	81	6.0
Kemptville											9	5.4
Pembroke	1	6.0	11	8.8	29	6.5	13	6.8	1	4.0	55	7.0
Parry Sound	1	5.0	42	7.1	37	4.6	18	5.8	3	3.7	101	5.8
North Bay											109	5.2
Sudbury			4	4.8	27	7.2	29	7.7	2	5.5	62	7.0
Sault Ste. Marie			13	6.9	32	4.7	8	5.5			53	5.4
White River			2	8.0	6	6.3	2	5.0	4	5.5	14	6.2
Chapleau			9	6.0	20	5.2	13	4.0			42	5.2
Gogana			20	6.9	21	4.5	13	3.3	4	4.7	58	5.1
Swastika			7	8.3	6	6.7	13	5.2	4	8.3	30	7.0
Geraldton			8	6.6	12	6.3	6	5.7	1	5.0	27	5.9
Port Arthur			2	7.5	35	5.3	16	2.9	1	9.0	54	4.7
Fort Frances	2	8.5	42	6.4	51	5.9	53	6.0	28	6.2	176	6.2
Kenora			9	4.6	10	5.3	17	4.9			36	5.2
Sioux Lookout			5	9.4	20	5.9	19	4.6	18	4.7	62	5.7
Ontario Total	16		226		362		275		75		1072	

Production, therefore, probably increased in 1962 over 1961 in Lindsay, Pembroke, Sudbury, Sault Ste. Marie, White River, Chapleau, Swastika, Geraldton and Fort Frances while it decreased in comparison to 1961 in Parry Sound, Port Arthur, Kenora and Sioux Lookout. In the other districts, Tweed, Kemptville, North Bay, Gogama and Cochrane, the data are insufficient to suggest trends.

As a result, it was predicted that grouse hunting would be slightly better in the northern region and in the southcentral region, slightly poorer in the western region and in the southeastern region and about the same in the southwestern region in 1962.

In order to have the district field officers concentrate on brood counts rather than other aspects of the work, it was suggested that the collection of wings and tails of grouse for age and sex studies would not be necessary in 1962. However, a number of districts had already established patterns of co-operation with hunters on a local basis and a total of 2,576 wings and tails were collected in 13 of the districts, compared with 3,286 in 1961 and 5,529 in 1960. In those districts where comparisons can be made between the juvenile to adult female ratio in 1961 and 1962, there was a decided increase in juveniles shot per adult female, except in Parry Sound District where there was a very much lower ratio than in 1961. It is worth noting that in 1961 the opposite was true with the exception of Kemptville and Parry Sound Districts.

The difference in the juvenile to adult female ratio is most marked in Lindsay, Sudbury, Sault Ste. Marie, White River, Swastika and Kenora. The Parry Sound data seems to be consistent between brood counts and juvenile to adult female ratio in both of the years 1961 and 1962.

In 1962, the districts were asked to concentrate on obtaining returns from at least 100 grouse hunters which would provide a sample of about 400 man-hours per district. Nineteen districts had hunter survey programs and approximately 1,500 hunters were involved for a total of 4,556 man-hours on foot. An additional 1,250 hunter-days were involved in road hunting, accounting for almost 20,000 road miles of ruffed grouse hunting. The birds shot per hundred hours varied widely between a low of 13.0 in the Sudbury District to a high of 65.3 in the Cochrane District. North Bay, White River, Chapleau, Cochrane and Kapuskasing had better than average hunter success while Geraldton, Sudbury, Kemptville and Lake Erie had poor hunter success. The rest of the districts were about the same, averaging between 25 and 35 birds per hundred hours of effort. There was a considerable decrease in birds seen and shot per hundred hours in Lake Erie, Kemptville, Sudbury, Swastika, Geraldton and Kenora while there was a considerable increase in hunter success in Tweed, Parry Sound, North Bay, Sault Ste. Marie, White River and Chapleau. The increase in Parry Sound, Chapleau, Sault Ste. Marie was threefold while the increase in North Bay and White River was twofold.

The fluctuations in hunter success from 1961 to 1962 are the reverse of the situation from 1960 to 1961 when there was an exceptional increase in the hunter success in the Kenora District and minor increases in Lake Erie and Kemptville Districts, while there were drastic decreases in hunter success in Pembroke, Parry Sound, Sault Ste. Marie, Chapleau, White River, Gogama and Geraldton. Geraldton District has experienced a decrease in hunter success in 1961 and again in 1962 over that experienced in 1960.

In 1962, the brood count data in comparison with the sex and age ratios of birds in the hunters' bags and hunter success seem to have great relationship than in 1961 or in 1960. The value of brood counts in predicting hunter success seems to be more substantiated.

Table No. 2

SEX & AGE OF RUFFED GROUSE IN HUNTERS' BAGS — 1962

	Sample Size				♂ / ♀	Total	♂ / ♀	1962		1961	
		♂	♀	?				Age Ratio Juv./Adult ♀	Age Ratio Juv./Adult ♀	Age Ratio Juv./Adult ♀	Age Ratio Juv./Adult ♀
Lindsay	88	17	6		2.8	65	0.75	10.8		5.8	
Kemptville	7	2	2		1.0	3	(2)	(1.5)		13.3	
Parry Sound	419	68	38	11	1.8	300	1.05	7.9		13.6	
North Bay	188	27	23	3	1.17	134	1.2	5.8		5.6	
Sudbury	444	72	58		1.24	314	1.04	5.4		1.7	
Sault Ste. Marie	484	59	25	3	2.4	367	2.0	14.7		4.5	
White River	55	18	5		3.6	32	0.8	6.4		3.9	
Gogama	137	18	13		1.4	44	0.7	8.2		7.2	
Swastika	364	70	31	14	2.3	249	1.6	8.0		1.9	
Cochrane	35	13	5	1	2.6	13	0.8	2.6			
Port Arthur	99			11		88		8.0/A		8.3/A	
Kenora	216	34	28		1.2	154	1.0	5.5		3.8	
Sioux Lookout	40	8	4		2.0	28	2.1	7.0		5.8	
Ontario Total	2576	406	238		1.71	1853	1.22	7.8			

Table No. 3

RUFFED GROUSE HUNTER SUCCESS

	On Foot		By Roads					
	Total Hunter Days	Total Hours	Birds Seen /100 Hours	Birds Shot /100 Hours	Total Hunter Days	Total Miles	Birds Seen /100 Miles	Birds Shot /100 Miles
Lake Erie	126	571.5	99.5	22.4				
Lake Simcoe	14	211	121	30.3				
Lindsay	20	42	147.6	35.7	30	961	7.77	2.7
Tweed	18	44	109.1	34.1	12	144	11.8	7.6
Kemptville	121	321	78.5	20.9				
Pembroke	106	224	98.6	33.9	84	1401	14.3	6.35
Parry Sound	175	454	63.0	37.7	104	1878	12.7	6.7
North Bay	173	483	98.9	53.8	84	1357	11.8	5.3
Sudbury	21	94	24.3	13.0	162	2409	4.2	1.9
Sault Ste. Marie	200†	496	77.5	31.4	350†	5171	15.4	3.3
White River	20†	40	71	47.5	10†		11.5	17.4*
Chapleau	28	100†	71	42	249	1181*	26.8*	4.4
Swastika	8	192	54.7	34.9	7	976	6.14	5.7
Cochrane	54	165.5	76.1	65.3	11	564	9.0	3.28
Kapuskasing	5	13	53.8	53.8	10	277	5.05	2.3
Geraldton	38	109	27.5	16.5	103	2549	3.45	
Port Arthur	288	868		29.7				
Kenora	59	86	65.2	36.0	11	252	7.93	3.17
Sioux Lookout	20†	42	42.8	23.8	20†	870	5.87	3.91
Ontario Total	1494	4556			1247	19990		

*Car-hours rather than miles

†Estimate

1962 HUNTING STATISTICS — PHEASANTS — LAKE SIMCOE DISTRICT

	Whitby			E. Whitby			Pickering			Markham			Whitchurch			King		
	Opening Day	Entire Season		Opening Day	Entire Season		Opening Day	Entire Season		Opening Day	Entire Season		Opening Day	Entire Season		Opening Day	Entire Season	
No. of parties -----	17	42		10	27		9	30		67	143		19	51		9	18	
Parties using dogs -----					12			19			79			16			10	
No. of hunters -----	43	138		22	66		26	101		190	421		57	184		25	57	
Total hunter hours -----	152	382		98	127		133	449		605	1462		240	567		141	204	
Cocks bagged -----	21	33		14	22		7	46		65	112		15	38		3	4	
Hens bagged -----	7	18		11	12		4	21		50	94		5	14		5	6	
Total bagged -----	28	51		25	34		11	67		115	206		20	52		8	10	
Per hunter cock -----	.49	.24		.64	.33		.27	.45		.34	.27		.26	.21		.12	.7	
Per hunter hen -----	.16	.13		.50	.18		.15	.21		.26	.22		.9	.7		.20	.11	
Per hunter total -----	.65	.37		1.14	.51		.42	.66		.60	.49		.35	.28		.32	.18	
Hr. to bag a bird -----	5.4	7.1		3.9	3.7		12.1	6.7		5.3	7.1		12.0	10.9		17.6	20	
Cocks seen (not shot) --	66	84		12	14		47	119		234	333		26	70		6	8	
Hens seen (not shot) --	22	43		11	14		52	95		229	342		26	47		11	11	
Total seen (not shot) --	88	127		23	28		99	214		463	675		52	117		17	19	
Sex ratio c/h shot -----	3-1	1.8-1		1.3-1	1.8-1		1.7-1	2.2-1		1.3-1	1.2-1		3-1	2.7-1		1-1.7	1-1.5	
Sex ratio c/h seen -----	3-1	1.9-1		1.1-1	1-1		1-1.1	1.3-1		1-1	1-1		1-1	1.5-1		1-1.8	1-1.4	

Pheasant Harvest Report

LAKE SIMCOE DISTRICT — 1962

Open Seasons. October 17 - October 27—Counties of York and Peel and Townships of East Whitby, Whitby, Pickering, Reach, Uxbridge and Scott in the County of Ontario.

October 17 - November 3—Counties of Dufferin and Simcoe.

October 6 - October 27—Remainder of the district.

Statistics. Although the hunting of pheasants was open throughout the entire district, our statistics cover only nine of the fifteen regulated townships in the district—East Whitby, Whitby, Pickering, Markham, Whitchurch, King, Caledon, Chinguacousy and Toronto. The remaining townships either were well outside pheasant habitat, or the amount of pheasant hunting was of little consequence and no reports were forwarded.

	<i>Opening Day</i>	<i>Entire Season</i>
No. of parties checked in the field	221	542
No. of parties using dogs, 48% or		263
No. of hunters checked in the field	596	1455
Total pheasants bagged	291	672
Per hunter bagged	.49	.46
Total hunter hours	2081	4939
Hours to bag a pheasant	7.2	7.4
Approximate kill in the nine townships		2280

See Table for complete summary.

Distribution. A total of 15,900 pheasant day-olds, poults and adults were received this year for distribution. All but 1,000 poults received from a private hatchery in Sault Ste. Marie were received from the Provincial Hatchery at Codrington. They arrived in the district as 8,300 day-olds, 7,000 poults and 600 adults. The majority of poults and adults were released shortly after arrival at their destinations. Day-olds were raised by regulated townships, township game commissions and interested sportsmen, to approximately 8 weeks before release. A loss of only 8.1% in raising day-olds to poults was reported from the six townships participating in the banding of all released birds within their boundaries.

Licences. A total of 6,341 township licences were sold up to the close of the pheasant season in the regulated townships. They consisted of 2,722 resident licences and 3,619 non-resident licences, a decrease of 7.8% from the previous year.

Weather. Changeable weather throughout the open season in the regulated townships again greeted the hunter, being a mixture of warm, sunny, overcast and wet. Light wet snow fell in the northern portions of the district on Tuesday, October 23, and covered most of the district by Friday, October 26. Most of it had melted by the following day.

Harvest. Some hunting took place in all fifteen regulated townships and a few outside areas such as Camp Borden, Stayner, Barrie, Reach and Uxbridge Townships. Hunter success and hours to bag a pheasant were down somewhat from the previous year. Although hunters in some townships reported a good number of pheasants seen, the birds seemed to be flushing faster than in previous years and presenting a more difficult target.

1962 HUNTING STATISTICS — PHEASANTS — LAKE SIMCOE DISTRICT

	Caledon			Chinguacousy			Toronto			District Total		
	Opening Day	Entire Season		Opening Day	Entire Season		Opening Day	Entire Season		Opening Day	Entire Season	
No. of parties	10	32		24	47		56	152		221	542	
Parties using dogs		20			29			78			263	
No. of hunters	21	78		60	128		152	382		596	1455	
Total hunter hours	80	198		190	438		442	1112		2081	4939	
Cocks bagged	8	26		15	43		34	87		182	411	
Hens bagged	5	24		2	17		20	55		109	261	
Total bagged	13	50		17	60		54	142		291	672	
Per hunter cock	.38	.33		.25	.34		.22	.23		.32	.28	
Per hunter hen	.24	.31		.3	.13		.14	.14		.17	.18	
Per hunter total	.62	.64		.28	.47		.36	.37		.49	.46	
Hr. to bag a bird	6.2	3.9		11.2	7.3		8.2	7.8		7.2	7.4	
Cocks seen (not shot)	17	59		20	35		112	182		540	904	
Hens seen (not shot)	18	59		12	25		45	139		426	775	
Total seen (not shot)	35	118		32	60		157	321		966	1679	
Sex ratio c/h shot	1.6-1	1.1-1		7.5-1	2.5-1		1.7-1	1.6-1		1.8-1	1.6-1	
Sex ratio c/h seen	1-1	1-1		1.7-1	1.4-1		2.5-1	1.3-1		1.3-1	1.2-1	

Statistics in comparison with the previous year are as follows:

	1961	1962		
Number of townships reporting	10	9		
Number of hunters	2195	1455	down	34%
Number of birds reported seen (not shot at)	2195	1679	"	24%
Number of birds reported harvested	1139	672	"	41%
Hunter success	.52	.46	"	12%
Man hours to bag a pheasant	6.8	7.4	up	8%

Remarks. Good hunter success figures this year came from the regulated townships in Ontario County where excellent success was reported on the opening day in East Whitby. Previously, such townships as Toronto in Peel County and Markham in York County enjoyed this honour. This year owing to some unknown factor, the Township of Toronto produced poor hunting throughout the entire season. It must be remembered, however, that in the previous year 1961, the Township of Toronto had 300 adult birds released just prior to the opening, whereas, this year the last release of poult pheasants was on September 23. Furthermore, seven of the lower townships in 1961 had a total of 2,307 adult birds released from 3 to 14 days prior to the opening date. These late releases in 1961, in comparison with the early releases of poults this year must definitely be considered as one of the factors which lower our percentage success this year.

Overall figures in all categories this year show a decline from the previous year and may be attributed to the following:

1. During the spring of 1962, the Township of Vaughan closed its lands to hunting, thus lessening some of our best pheasant hunting areas.
2. Most pheasants were planted at least eight weeks prior to the opening day.
3. Gradual increase in posted lands just prior to the open pheasant season in our lower townships of good pheasant habitat and in some cases where pheasants had been released.

It is interesting to note, however, that in the last three seasons, hunter success has varied between .46 and .52, with man hours to bag a pheasant between 6.8 and 7.4.

Special Pheasant Survey

MARKHAM TOWNSHIP, 1962 — LAKE SIMCOE DISTRICT

At the conclusion of the open season for pheasants in 1962 in the regulated township of Markham, a total of 595 resident and non-resident township licences had been sold. A 20% sample mail survey of the number of licences sold indicated that 147 pheasants had been harvested in 188 man-days of hunting, for a hunter success figure of 1.7 bird per hunter (season) and 1.28 man-days were required to bag a bird.

The purpose of the survey was to determine total hunting activity and total harvest of planted birds as well as birds produced naturally, in order to have data which could be used in comparison with field survey figures.

Two methods were attempted. A questionnaire was placed in the same envelope when each township licence was being mailed to the purchaser by the Markham Township Clerk's Office. Only 37 questionnaires or 6.2% of the total were returned by hunters purchasing licences. This data was not used.

All names and addresses of licencees were obtained from the Clerk's Office. Twenty percent or every sixth name on the list was sent a mailed questionnaire,

together with a stamped, addressed, return envelope enclosed (121). This first questionnaire was followed up in two weeks by 55 second requests, then later twenty-four received third requests, plus some twenty-five telephone calls and personal contacts. Of the 20% contacted (121 hunters), we were able to receive 102 questionnaires back, or 84.3% return.

In addition, a field survey was carried out by Conservation Officers checking hunters and their bag. The results are compared with those of the mail hunter survey in Table No. 1.

Results of the survey are tabled as follows:

1. Result of Mail Survey and in Comparison with Field Survey.
2. ~~Hunter Success~~ for those hunters hunting over three days.
3. Hunters and their Success during the Different Days of the Season.
4. Number of Days of Hunting by Hunters.

Table No. 1

RESULTS OF MAIL SURVEY IN COMPARISON WITH FIELD SURVEY

	Mail Survey	Field Survey
Number of licences sold -----	595	595
Number of questionnaires forwarded -----	121 (or app. 20%)	
Number of hunters reporting -----	102 (84.3)	421
Number of questionnaires received uncompleted -----	7	
Number of hunters reporting not hunting -----	10	
Number of hunters reporting hunting -----	85	
Number of pheasants harvested -----	147	206
Man-days hunted -----	188	
Average number of days per hunter -----	2.2	
Hunter success (bird per hunter season) -----	1.7	1.08
Hunter success (bird per hunter day) -----	.73	.49
Man-days to kill a pheasant -----	1.28	
Man-hours hunted -----		1462
Man-hours to kill a pheasant -----		7.1
Banded birds in total harvest (28) -----	19%	16%
Total No. of licencees not hunting 10.5% -----	62.6	
Estimated harvest for the township 10 147		
595 - ($\frac{10}{95} \times 595$) = $63 \times \frac{147}{85}$ = -----	920	
Length of average hunting day when checked -----		3.5 hrs.

Table No. 2

HUNTER SUCCESS PER DAY

No. Days	No. Hunters	No. Man-Days	Harvest	Bird per Hunter	Man-Days per Bird
1	34	34	19	.56	1.8
2	24	48	30	1.2	1.6
3	16	48	54	3.4	.89
4	7	28	21	3.0	1.3
5	1	5	1	1.0	5.
6					
7	1	7	3	3.0	2.3
8	1	8	11	11.0	.73
9					
10	1	10	8	8.0	1.3

Table No. 3

NUMBER OF HUNTERS AND THEIR SUCCESS
DURING DIFFERENT DAYS

Date		No. of Hunters Hunting	Birds Shot	Success
October 17	Wednesday -----	54	65	1.2
" 18	Thursday -----	15	8	.53
" 19	Friday -----	13	10	.77
" 20	Saturday -----	47	31	.66
" 22	Monday -----	13	7	.58
" 23	Tuesday -----	9	4	.44
" 24	Wednesday -----	9	Nil	
" 25	Thursday -----	13	6	.42
" 26	Friday -----	6	Nil	
" 27	Saturday -----	29	16	.55
			147	

Table No. 4

NUMBER OF DAYS OF HUNTING BY HUNTERS

Days of Hunting	No. of Hunters	% of Total Hunters
1	34	40
2	24	28
3	16	19
4	7	9
5	1	1
6	Nil	
7	1	1
8	1	1
9	Nil	
10	1	1

Remarks. From the figures compiled for this report, we feel that five points stand out:

Only 13% of all hunters hunted over three days.

The heaviest hunting pressure took place on the opening day and the two following Saturdays.

The highest hunter-success was on the opening day when 44% of the total harvest was made.

The percentage of banded birds harvested is only 3% higher than the number estimated by the field survey.

Mail surveys such as this one are time consuming and expensive, but well worth the effort, since figures add to the value of field surveys and allow the opportunity to determine the total hunting harvest and total hunting intensity.

Duck Banding

WOODDUCK BANDING

One of the main species of dabbling ducks which is hunted in southern Ontario is the woodduck. During the past few years in Ontario, the bag limit of woodduck has been restricted to 1 or 2 birds per day. Since this species makes up a large percentage of the total bag in eastern Ontario, the restricted bag limit has had a tremendous effect on duck hunting in that area.

Since the woodduck is so important in the eastern part of Ontario and in the New England States, the Province as well as the Eastern Seaboard States is interested in understanding the population dynamics of the species in order to adjust bag limits to provide for a maximum harvest.

As a result, the Atlantic Flyway Council comprising the provinces of eastern Canada and the eastern states of the United States have embarked on a three-year program of woodduck banding. This banding is difficult to accomplish since woodduck do not concentrate in large numbers anywhere in the Flyway, either in the summer or the winter.

Recognizing the importance of this species in Ontario, an attempt was made in 1962 to increase the number of woodduck banding sites. The Lindsay District was successful in banding 100 woodduck in the Nogies Creek area during July and August. The Pembroke District with as much time and effort was able to band 79 woodduck during August and early September near Pembroke. The Lake Simcoe District had remarkable success in that they were able to band 62 birds in one day's operation at Horning's Mills.

In addition, the Lake Erie District at Long Point banded 8 woodduck and the Oshawa Fish and Game Club Banding Program, originally initiated by the Lake Simcoe District, in the course of banding over 1,000 ducks in the Oshawa marshes, banded 84 woodduck.

From these five locations, 333 woodduck of our Ontario quota of 500 were banded. This is a considerable contribution to the project of the Atlantic Flyway and this work should continue for at least three years.

In 1962, the Kemptville, Tweed, Lake Huron and Lake Erie Districts were unsuccessful in banding reasonably large numbers of woodduck; nevertheless, they have gained sufficient experience to allow us to reach our quota of 500 in the coming year.

BLACK DUCK BANDING

The Oshawa Fish and Game Protective Association banded the following waterfowl from July 29 to October 9 without the assistance of members of the Department of Lands and Forests, although this banding site was initiated by the Lake Simcoe District.

Bluewinged Teal	420
Greenwinged Teal	106
Black Duck	472
Mallard	339
Woodduck	84
Pintail	36
Gallinule	36
Black-Mallard Hybrid	3
	<hr/>
	1496

The Geraldton District again carried out banding operations at Arm Lake during 1962. They were successful in banding 136 ducks as follows:

Black	70
Mallard	41
Goldeneye	4
Baldpates	9
Lesser Scaup	7
Greenwinged Teal	5

Since 1956, the Gogama District has carried out a waterfowl banding project at Halliday Lake for approximately 24 days in mid-August and early September. They have banded as follows:

1956	462
1957	206
1958	285
1959	198
1960	163
1961	112
1962	263

The banding was mainly of black ducks but consisted of the following:

Black ducks	246
Mallard	15
Goldeneye	2

In addition, the Cochrane and Fort Frances Districts co-operated with the U.S. Fish and Wildlife Service in an attempt to band black ducks in these districts. The black duck concentrations were not sufficient in the Fort Frances District and the agent for the U.S. Fish and Wildlife Service moved to Lillabelle Lake at Cochrane where he banded large numbers of black ducks and established a most satisfactory banding station there which now can be carried on by the District staff, with or without the assistance of the U.S. Fish and Wildlife Service.

Public Hunting Areas, 1962

During 1962, three kinds of areas were operated for public hunting on a controlled basis where fees were charged for hunting on the specified area. There were two controlled waterfowl hunting units operating at Darlington Provincial Park and on Crown Lands adjacent to Long Point Provincial Park. In addition, three areas of marsh in Rondeau, Holiday Beach and Presqu'ile Provincial Parks were used again for duck hunting, where hunters paid an annual fee of \$4.00 for waterfowl hunting privileges.

All of the area of Sibbald's Point Park and Darlington Park were used for controlled pheasant shooting as well as a large area in Presqu'ile Park. In each of these latter three areas between 250 and 350 acres of land were available for pheasant hunting. In previous years, only a small portion of the Park was set aside for this purpose.

Table No. 1 is a summary of the use of the Waterfowl Hunting Units in

1961 and 1962. The number of hunters using Darlington is restricted by the small size of this marsh and the number of hunters was similar to the previous year. Hunting was more efficient or hunting conditions were better, since the bag per hunter rose from .33 in 1961 to .51 in 1962.

At the Long Point Controlled Hunting Area, the number of hunters increased by about 20% from 1961. This was a result of increased publicity of the shooting at Long Point and hunter acceptance of the philosophy of controlled hunting. We can expect a further increase in 1963 after which time there may be difficulty in handling hunters, especially on weekend days. The bag of waterfowl increased substantially in 1962, almost doubling the total harvest on the area. The ducks per hunter increased from .58 to .84, a result of better hunting techniques as well as improved management of the hunters and the waterfowl by the Unit staff.

On the free zone on the Long Point Waterfowl Unit, the number of hunters using the zone decreased as did the total number of ducks harvested. The bag per hunter remained about the same as in 1961. Consideration will eventually be given to the elimination of this free zone at Long Point.

At Rondeau Park, the number of seasonal licences increased slightly as did the number issued in 1962 at Holiday Beach. At Presqu'île Provincial Park, there was a slight decrease in the number of seasonal licences issued.

Increases in numbers of hunters were experienced on the pheasant hunting unit operated during 1962. The increase was in the order of 173% for the three hunting areas operated. Table No. 2 indicates the increase in hunters, pheasants released and pheasants bagged for each of Darlington, Presqu'île and Sibbald's Point Hunting Units.

Although the number of hunters almost tripled, the number of pheasants required to be released was only slightly more than twice the number used in 1961. In 1961, the percentage of birds bagged in relation to the numbers released varied widely between the three areas. In 1962, our objective was to provide for a greater return of stock birds to the hunter. This was successfully done and an average of 83% of all birds released was bagged by hunters.

In addition, the bag per hunter was low in the Sibbald's Point Unit and high in Presqu'île and Darlington in 1961. Our aim in operating these Units was to provide hunters with approximately 1.5 birds per hunting day. In 1962, as a result of experience and better management by the Hunting Unit Managers, the bag per hunter was maintained throughout the season at between 1.3 and 1.5 birds per hunter.

Although the Presqu'île Unit is not operating at full capacity, both Darlington and Sibbald's Point are attracting more hunters than they can accommodate. On Saturdays, hunters are turned away in almost the same numbers as they are accepted. It is obvious that larger Units are required in order to accommodate the numbers of hunters desiring this type of pheasant hunting in southern Ontario.

The results of 1962 indicate that excellent hunting can be provided and excellent returns of stock pheasants may be obtained. It is rarely possible in a pheasant stocking program to account for more than 50% of all the adult birds stocked or more than 10 to 20% of the poults released. The experiment at our three pheasant hunting Units indicates that the use of older birds in restricted areas in Ontario is well justified and that hunters are willing to pay a nominal fee for improved pheasant hunting.

The controlled waterfowl areas offer duck hunting of high quality since competition between hunters is reduced to a minimum. We expect an improvement in the average bag of waterfowl on the Long Point Unit as it becomes better established and hunters become better acquainted with the proper methods of

hunting. It is obvious that to maintain the quality of waterfowl hunting on areas such as Long Point, additional areas will be required in order to accommodate those desiring this type of hunting.

Table No. 1

WATERFOWL HUNTING UNITS					
Unit	Year	Blind Days	No. Hunters	Ducks Bagged	Ducks per Hunter
Darlington -----	1961	247	420	141	0.33
	1962	250	417	213	0.51
Long Point Controlled Zone -----	1961	753	1544	811	0.58
	1962	900	1812	1522	0.84
Long Point Free Zone -----	1961		434	205	0.54
	1962		339	187	0.55
Rondeau -----	1961		248*		
	1962		282*	4035	
Holiday Beach -----	1961		290*		
	1962		320*	1051	
Presqu'ile -----	1961		263*		1.5
	1962		237*		
*Seasonal licences					
Rondeau Hunter-days — 996					
Holiday Beach Hunter-days — 1,063					

Table No. 2

PHEASANT HUNTING UNITS						
	Year	No. Hunters	Pheasants Released	Bagged	Bag/ Hunter	% Return
Darlington -----	1961	171	408	318	1.9	75
	1962	385	690	591	1.5	85
Presqu'ile -----	1961	74	185	162	2.2	88
	1962	211	380	315	1.5	83
Sibbald's Point ----	1961	134	210	132	0.98	63
	1962	438	700	569	1.3	81
All Areas -----	1961	379	803	612		
	1962	1034	1770	1475		

Table indicating the activities of Pheasant Hunting Preserves,
year ending March 31, 1962

District	No. of Preserves	Total licenced acreage not including Islands	Total Purchases	Total Release	Total of Birds Removed	No. of Hunters	Stock March 31/62
Aylmer	18	5822.9	7962	9413	6259	1068	567
Hespeler	10	2203	7675	7731	4886	528	926
Lindsay	7	1700	3252	3368	2213	449	29
Maple	4	1053	4767	4498	2673	1246	71
Tweed	3	236	40	5280	2492	204	500
Kemptville	2	672	1086	960	467	152	55
Pembroke	1	120	500	280	53	23	53
Sault Ste. Marie	2	760	60	610	271	135	Nil
Parry Sound	1	100	275	275	207	40	Nil
Total	48	12666.9	25617	32415	19521	3845	2201

Table indicating activities of — Commercial Pheasant Farms for the year ending March 31, 1963

District	No. of Farms	Eggs	Purchases Chicks & Poults	Adult Birds	Sales of Dressed Birds	Sales of Eggs	Sales of Chicks & Poults	Sales of Live Adult Birds	Stock March 31/63
Aylmer	45	602	Can. 7148 U.S.A. 1000	944	5564	1145	19762	7011	3537
Hespeler	64	Nil	Can. 7835 U.S.A. 3000	1334	11796	338	2576	4463	1765
Kemptville	6	Nil	Nil	55	Nil	Nil	53	162	160
Lindsay	10	Nil	1750	292	288	60	8	1134	477
Maple	22	Nil	Can. 95 U.S.A. 5300	323 Can. U.S.A. 200	5955	42	1045	1047	373
Sault Ste. Marie	5	Nil	60	12	364	148	4903	1542	1048
Tweed	15	Nil	Nil	70	1107	320	1557	191	796
Swastika	1	Nil	Nil	500	606	Nil	Nil	Nil	60
Pembroke	1	Nil	500	Nil	73	Nil	Nil	41	53
Sudbury	1	Nil	Nil	Nil	309	Nil	Nil	100	100
Parry Sound	2	Nil	U.S.A. 315	305	Nil	92	1026	281	355
Totals	172	602	Can. 17388 U.S.A. 9615	Can. 3835 U.S.A. 200	26062	2145	30930	15972	8724

FUR MANAGEMENT

In 1962-63 most of the province enjoyed better trapping conditions than those that prevailed during the preceding season. Partly as a result of the improved weather, snow and ice conditions, there was an increase in the quantities caught of all species except marten and mink. Beaver were outstanding with a total catch greater than ever before recorded for Ontario. The previous record was in 1957-58 with a harvest of 140,371 pelts whereas this year the harvest was 167,408, thus breaking the record by some 27,000.

In recognition of the frequently late spring thaw in the extreme north, the closing date for beaver trapping in the North and Northwestern sections of the province was extended this year from March 31 to April 15.

The Ontario Trappers' Association Fur Sales Service held five sales at their North Bay warehouse again this year, with continuing success. Sales were December 11, January 18, March 4, April 18 and May 27. Further quantities of fur were received at the warehouse after the final sale, so with the trappers' consent a bulk shipment was made to Winnipeg to be sold at the June 26 sale.

Pelt volume increased 48% over the previous year while the total value increased 85%, indicating an improved demand for most species.

Beaver dominated the sales again this year making up 63.5% of the total sales value. Mink and Muskrat were about equal, with the former accounting for 12.4% and the latter 12.1%. Otter made up 4.2% of the sales revenue, followed by Marten and Raccoon each with 1.7%, Lynx 1.6%, Fisher 1.3%, and Fox, Weasel and Squirrel together with Wolves, Bear and Castoreum making up the remainder.

Beaver — Demand, value and catch are all higher than last year, and the outlook is good for next year.

Mink — The catch is still slipping down, although not nearly as badly as last year. However, the drop in volume was offset by an increase in the average value.

Muskrat — The price and demand is much improved, due in part to increasing European interest in this item. The volume harvested is still far below the provincial potential.

Otter — A slight increase in the harvest was evident. This species is one of the most stable of our furs both in production and value.

Fox and Raccoon — There is an improving demand for these two items which resulted in increased values.

Fisher and Marten — There was a very poor demand for fisher coupled with a lower average price. On the other hand, demand and price for marten increased, although the catch dropped.

Lynx — The catch is still improving, thus setting another record for harvest of this species in Ontario. Along with the other "fine" or "long" furs, except fisher, the price is increasing.

Weasel, Squirrel and Skunk — Numbers of these taken remain quite low and combined with the low prices paid are of little importance except to the young trapper.

Castors — There is an increasing demand for this item and the price is also

improving. Castors are the scent glands of beaver and the castoreum is used primarily as a base for the manufacture of perfumes.

Bear and Wolves — Market and demand improving. At the North Bay sales bear hides brought an average of \$15.21 with \$30.00 as the highest price paid. Wolves averaged \$5.15 with a high of \$13.00.

TRENDS IN TOTAL SEALED PELTS AND VALUES

	Total Sealed 1961-62	Total Sealed 1962-63	% Change Volume	Average* Value 1961-62	Average* Value 1962-63	% Change Value
Beaver -----	137,609	167,408	+ 21.6%	10.48	12.67	+ 20.8%
Fisher -----	2,728	2,830	+ 3.7%	13.51	10.27	- 24.3%
Lynx -----	4,578	4,743	+ 3.6%	9.02	13.28	+ 47.2%
Marten -----	10,260	7,748	- 24.5%	3.66	6.61	+ 80.6%
Mink -----	47,215	43,048	- 8.8%	8.98	12.21	+ 35.9%
Otter -----	7,456	8,326	+ 11.6%	24.40	23.82	- 2.4%

*Average for all grades and sizes throughout season at O.T.A. fur sales, North Bay.

RECORD OF CATCH BY DISTRICTS, 1962-63

No. of Trap.	Beaver*	Fisher*	Lynx*	Marten*	Mink*	Otter*	Col. Fox**	Muskrat**	Raccoon**	Skunk**	Squirrel**	Weasel**
Chapleau -----	79	893	47	30	509	337	97	45	1,137	—	19	129
Cochrane -----	164	2,527	70	120	620	492	122	49	1,587	—	—	246
Fort Frances -----	155	11,955	219	62	23	920	238	134	9,432	1	692	212
Geraldton -----	238	8,889	38	88	1,665	885	462	90	2,500	—	1,100	900
Gogama -----	92	837	25	38	528	360	129	28	2,046	—	100	103
Kapuskasing -----	281	8,361	75	115	1,609	824	362	70	3,602	—	202	331
Kemptville -----	545	2,588	1	—	—	629	17	34	44,240	389	40	117
Kenora -----	455	14,689	265	117	4	1,893	365	32	4,842	—	741	167
Lake Erie -----	498	6	—	—	—	884	—	91	48,044	44	—	65
Lake Huron -----	638	101	—	—	—	2,669	2	130	45,870	7	14	118
Lake Simcoe -----	342	2,065	8	—	—	2,469	21	19	25,381	6	72	120
Lindsay -----	531	6,683	121	1	24	1,853	119	31	35,002	—	56	145
North Bay -----	432	7,320	272	92	43	2,078	263	17	4,326	8	—	182
Parry Sound -----	684	12,876	105	13	152	4,266	374	46	18,423	—	201	479
Pembroke -----	163	5,383	293	1	211	1,467	183	27	6,275	106	61	141
Port Arthur -----	239	11,823	306	241	425	800	372	270	1,962	—	554	367
Sault Ste. Marie -----	361	3,211	56	28	235	1,141	212	60	2,447	—	5	233
Sioux Lookout -----	145	3,431	80	93	211	344	140	31	1,085	1	243	177
Sudbury -----	265	8,357	110	64	6	2,262	321	103	6,944	40	180	311
Swastika -----	184	2,602	99	275	31	659	111	12	949	—	13	126
Tweed -----	1,041	10,291	16	—	1	1,408	213	31	55,939	541	86	301
White River -----	90	3,689	18	40	294	480	169	28	480	—	57	75
Patricia Central -----	799	18,306	80	1,209	477	8,656	2,317)	Patricia Central and West, combined export permits				
Patricia West -----	745	10,245	495	1,817	76	3,943	749)	134	17,350	—	7,625	4,396
Patricia East -----	282	10,280	31	299	604	1,329	968	135	5,565	—	789	772

* Accurate, figures from sealing reports.

** Estimate only, figures from trappers' returns.

AVERAGE PRICE AND CATCH RECORDS

	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62*	1962-63*
Beaver							
Year's Catch ----	106738	140371	120566	110615	132375	137609	167408
Ave. Price Pd. --	11.10	10.50	10.40	13.30	10.70	10.48	12.67
Fisher							
Year's Catch ----	2127	3173	2365	3125	3348	2728	2830
Ave. Price Pd. --	17.40	16.30	15.95	19.20	8.00	13.57	10.27
Fox, Coloured							
Year's Catch ----	1253	2031	1858	1188	1655	2960	1647
Ave. Price Pd. --	.50	.75	1.45	2.77	2.10	3.32	5.02
Fox, Arctic							
Year's Catch ----	60	128	302	85	98	130	61
Ave. Price Pd. --	15.00	14.65	14.35	20.00	20.00	15.00	15.00
Lynx							
Year's Catch ----	564	1103	2242	4038	4502	4578	4743
Ave. Price Pd. --	5.80	6.75	13.40	15.10	7.70	9.02	13.28
Marten							
Year's Catch ----	4467	6061	4559	6361	9325	10260	7748
Ave. Price Pd. --	5.25	4.75	4.95	4.75	3.45	3.66	6.61
Mink							
Year's Catch ----	36284	49484	44926	47445	61520	47215	43048
Ave. Price Pd. --	13.30	10.50	11.40	13.25	8.35	8.98	12.21
Muskrat							
Year's Catch ----	443153	446578	337986	320287	304731	377888	345428
Ave. Price Pd. --	.95	.75	.84	.81	.54	.98	1.60
Otter							
Year's Catch ----	5727	8519	6698	6040	7422	7456	8326
Ave. Price Pd. --	26.55	22.50	22.70	25.90	23.70	24.40	23.82
Raccoon							
Year's Catch ----	10551	9596	4200	10580	7433	9543	9190
Ave. Price Pd. --	1.60	1.30	1.35	2.01	1.70	3.00	3.39
Skunk							
Year's Catch ----	1105	2019	572	389	216	264	112
Ave. Price Pd. --	.72	.82	.87	.70	.45	.50	.72
Squirrel							
Year's Catch ----	19440	14778	11330	9255	12496	10099	12851
Ave. Price Pd. --	.14	.15	.11	.10	.12	.15	.23
Weasel							
Year's Catch ----	17981	16410	11626	12472	12631	11143	10213
Ave. Price Pd. --	.67	.52	.56	.60	.45	.49	.39

*Average price used is from O.T.A. North Bay Sales.

REVENUE RECEIVED FROM EXPORT PERMITS

July 1st, 1962 to June 30th, 1963

	Total Amount of Pelts	Total Amount of Revenue
Beaver -----	164,293	\$164,293.00
Fisher -----	2,862	2,862.00
Fox (White) -----	48	36.00
Lynx -----	4,818	722.70
Marten -----	7,385	3,692.50
Mink -----	41,987	41,987.00
Muskrat -----	358,010	17,900.50
Otter -----	8,416	10,520.00
Weasel -----	12,724	636.20
Wolverine -----	4	1.60
Fox (Cross) -----	206	
Fox (Red) -----	2,233	
Fox (Silver, Black or Blue) -----	380	
Raccoon -----	19,914	
Skunk -----	67	
TOTAL REVENUE		<u>\$242,651.00</u>

ROYALTY RECEIVED FROM TANNERS PERMITS

July 1st, 1962 to June 30th, 1963

	Total Amount of Pelts	Total Amount of Revenue
Beaver -----	2,433	\$2,433.00
Fisher -----	17	17.00
Fox (White) -----	13	9.75
Lynx -----	53	7.95
Marten -----	472	236.00
Mink -----	1,133	1,133.00
Muskrat -----	61,946	3,097.30
Otter -----	33	41.25
Weasel -----	109	5.45
Wolverine -----	1	.40
Fox (Cross) -----	29	
Fox (Red) -----	303	
Fox (Silver, Black or Blue) -----	33	
Raccoon -----	2,465	
Skunk -----	100	
TOTAL REVENUE		<u>\$6,981.10</u>

**STATEMENT OF WILD PELTS EXPORTED OR TANNED SHOWING
NUMBER AND VALUE OF PELTS AND ROYALTY RECEIVED FROM**

July 1st, 1962 to June 30th, 1963

	Pelts Exported	Pelts Tanned	Total Pelts	Value of Pelts
Beaver -----	164,293	2,433	166,726	\$1,959,030.50
Fisher -----	2,862	17	2,879	32,100.85
Fox (White) -----	48	13	61	915.00
Lynx -----	4,818	53	4,871	53,824.55
Marten -----	7,385	472	7,857	47,534.85
Mink -----	41,987	1,133	43,120	491,568.00
Muskrat -----	358,010	61,946	419,956	587,938.40
Otter -----	8,416	33	8,449	196,016.80
Weasel -----	12,724	109	12,833	5,389.68
Wolverine -----	4	1	5	52.50
Fox (Cross) -----	206	29	235	930.60
Fox (Red) -----	2,233	303	2,536	9,560.72
Fox (Silver, Black or Blue) --	380	33	413	1,961.75
Raccoon -----	19,914	2,465	22,379	52,366.86
Skunk -----	67	100	167	120.24
	<u>623,347</u>	<u>69,140</u>	<u>692,487</u>	<u>\$3,439,311.30</u>
Revenue received from Export Permits -----				\$ 242,651.50
Revenue received from Tanners Permits -----				6,981.10
TOTAL REVENUE -----				<u><u>\$ 249,632.60</u></u>

**STATEMENT OF RANCH-RAISED PELTS EXPORTED OR TANNED
SHOWING NUMBER AND VALUE OF PELTS FROM**

July 1st, 1962 to June 30th, 1963

	Pelts Exported	Pelts Tanned	Total Pelts	Value of Pelts
Fox (Silver, Black or Blue) --	88	63	151	\$ 1,208.00
Mink -----	335,969	50,013	385,982	6,175,712.00
	<u>336,057</u>	<u>50,076</u>	<u>386,133</u>	<u>\$6,176,920.00</u>

**REVENUE RECEIVED FROM PELTS EXPORTED OR TANNED IN
YEAR ENDING JUNE 30th, 1963**

Number of Pelts			Royalty on Wild Pelts		
Export Beaver	Total Export	Total Tanners	Export Beaver	Total Export	Total Tanners
164,293	959,404	119,216	\$164,293.00	\$242,651.50	\$6,981.10

PELTS EXPORTED OR TANNED IN YEAR ENDING JUNE 30th, 1963

Number of Pelts				Value of Pelts		
Wild	Ranch Mink	Total Ranch	Total	Wild	Ranch	Total
692,487	385,982	386,133	1,078,620	\$3,439,311.30	\$6,176,920.00	\$9,616,231.30

WOLF BOUNTY, 1962-1963

The Wolf and Bear Bounty Act authorizes the payment of a \$25.00 bounty on a timber or brush wolf three months of age or over and a \$15.00 bounty on a timber or brush wolf under three months of age.

The whole pelt of the wolf must be presented as evidence on wolves killed in the Counties and the Provisional Judicial District of Manitoulin. However, the whole unskinned head of the wolf may be presented in lieu of the whole pelt, on wolves killed in the Provisional Judicial Districts, excepting Manitoulin.

The Department pays the whole bounty on wolves killed in the Provisional Judicial Districts; whereas on wolves killed in the Counties the Department pays 40% of the bounty and the respective County pays the remaining 60%.

The following table shows the number and species of wolves killed and the amount of bounty paid during the past five years:

Period	Timber	Brush	Pups	Total	Bounty
For year ending March 31, 1959	1169	606	49	1824	\$41,589.00
For year ending March 31, 1960	939	528	42	1509	\$33,619.00
For year ending March 31, 1961	1320	761	57	2138	\$48,766.00
For year ending March 31, 1962	1136	794	68	1998	\$44,510.00
For year ending March 31, 1963	1276	691	64	2031	\$44,664.00

A total of 1,531 claims were received and considered by the Department. Twenty-one claims representing 8 wolves and 14 dogs were refused.

While there was an over-all increase of 1.6% in the wolf kill this year compared to the previous year, the factors responsible for the marked decrease of 65.9% in the brush wolf kill on Manitoulin Island are unknown. The wolf population in this area is being studied under the Wolf Research Project; however no activities in connection with this study would in any way affect the wolf kill and the study is somewhat hampered by the scarcity of wolves in the area.

It is interesting to note that 73 timber, 35 brush and 1 pup for a total of 109 wolves were killed by being struck by cars or trucks on highways or other

travelled roads. Seven wolves were killed by train. While most of the above were killed under accidental circumstances, one wolf was killed from a snowplane, 3 were killed from an ice-scooter and 161 wolves were killed from aircraft, where the wolves were hunted and shot under a special license issued for that purpose.

A report on the Wolf Research Project will be found in the Research Branch's Section of this Annual Report.

The following table shows the number of wolves killed, by County and District, on which claims for bounty were received:

County	Timber	Brush	Pups	Total
Bruce -----		12		12
Carleton -----		3		3
Dufferin -----	2	11		13
Dundas -----		1		1
Durham -----		14		14
Elgin -----		4		4
Essex -----		2		2
Frontenac -----	1	23		24
Glengarry -----		3		3
Grey -----		8		8
Haldimand -----		2		2
Halton -----		1		1
Hastings -----	15	16	5	36
Huron -----		3		3
Kent -----		4	10	14
Lambton -----		8	5	13
Lanark -----		18		18
Leeds & Grenville -----		16		16
Lennox & Addington -----	5	12	3	20
Middlesex -----		1	2	3
Norfolk -----		3		3
Northumberland -----		6	4	10
Ontario -----		3		3
Peterborough -----	11	5		16
Prescott -----		1		1
Prince Edward -----		1		1
Renfrew -----	64	8		72
Russell -----		1		1
Simcoe -----	1	21		22
Victoria -----	13	12		25
York -----		1		1
TOTAL FOR COUNTIES -----	112	224	29	365

District	Timber	Brush	Pups	Total
Algoma -----	91	84		175
Cochrane -----	171	1	26	198
Haliburton -----	12			12
Kenora -----	274	74		348
Manitoulin -----	13	45		58
Muskoka -----	14	6		20
Nipissing -----	124	17		141
Parry Sound -----	73	14		87
Rainy River -----	57	82		139
Sudbury -----	141	79	1	221
Timiskaming -----	47	7		54
Thunder Bay -----	147	58	8	213
TOTAL FOR DISTRICTS -----	1164	467	35	1666
TOTAL FOR COUNTIES -----	112	224	29	365
GRAND TOTAL -----	1276	691	64	2031

FUR FARMING, 1962

As predicted, the mink pelt market opened in December with strong demand for Standard Dark and Pastel types. The Darks sold at prices up to 25% above the same period last year with clearances of 95%. The Pastels enjoyed very firm prices to 10% above last year's levels with clearances of 90%. While the Sapphire mink sold well at slightly easier prices, the Pearls and Beige types were 80% to 85% cleared at 20% below last year's levels. Prices for White mink were firm, while Aleutian prices were easier. Clearances for these types were around 75%.

This market pattern continued through the months of January, February, March and April when it was estimated that 95% of the Canadian ranch mink crop was sold.

Once again European buyers were present at most of the offerings throughout the season and were responsible in great measure for the spirited bidding which accompanied the sale of the most wanted mink types. At times they dominated sales, outbidding major American and Canadian buyers for top quality pelts. With the expanding economy of the European countries the demand for furs, particularly mink, has been an important factor in absorbing large quantities of pelts and stabilizing prices.

Another important factor in the fur market is the enormous quantities of mink used by the trimming trade. In addition to using mink for trim on cloth coats, contrasting fur coats, suits, dresses and sweaters, mink is also being used for trim on sportswear garments. It is estimated that some four to five million pelts are consumed in these operations by the trimming trade. This is indeed important when one realizes that the world production of ranch mink was in excess of 16 million pelts in 1962.

Canada Mink Breeders, the national organization which represents the mink ranching industry, held its 10th Annual Meeting at Vineland, Ontario, in September. This was followed by an International Mink Breeders Conference held in Niagara

The following table shows the location, by County or District, of Licensed Fur Farms in 1962.

County or District	Number
Algoma -----	1
Brant -----	12
Bruce -----	22
Dufferin -----	5
Durham -----	9
Elgin -----	6
Essex -----	11
Frontenac -----	3
Grenville -----	3
Grey -----	27
Haldimand -----	9
Haliburton -----	1
Halton -----	24
Hastings -----	1
Huron -----	12
Kenora -----	5
Kent -----	15
Lambton -----	3
Lanark -----	5
Leeds -----	3
Lincoln -----	24
Manitoulin -----	5
Muskoka -----	2
Middlesex -----	20
Nipissing -----	3
Norfolk -----	12
Northumberland -----	1
Ontario -----	13
Oxford -----	16
Parry Sound -----	4
Peel -----	7
Perth -----	43
Peterborough -----	1
Rainy River -----	3
Simcoe -----	26
Sudbury -----	2
Thunder Bay -----	12
Victoria -----	4
Waterloo -----	21
Welland -----	15
Wellington -----	39
Wentworth -----	24
York -----	26
TOTAL -----	500

Falls, Ontario. The conference was convened on the invitation of Canada Mink Breeders, and delegates representing Denmark, Finland, Norway, Sweden, the United Kingdom, the United States and Canada attended.

Agreements were reached on the exchange of information concerning statistics, research, import restrictions and regulations. It was also agreed that the present international promotion campaigns which are carried out by the North American and European mink organizations should be maintained on the highest possible budget level, and be extended and increased in efficiency so as to influence the largest possible circle of markets and potential customers.

Of the three main mink organizations, namely, EMBA representing the

U.S.A., SAGA representing the Scandinavian countries, and CMB, the advertising budget of Canada Mink Breeders is the smallest at \$250,000 for this year.

The Ontario Fur Breeders Association in addition to the regular monthly meetings of the Directors also held a Spring Short Course, a Field Day and a Live Mink Show as educational programs for the members. The Association also was host to the Annual Meeting of Canada Mink Breeders which was held this year in Ontario.

Among diseases of lesser importance, 14 cases of Distemper and 5 cases of "Aleutian" disease were reported by Ontario ranchers to the Fur Bearing Animal Diseases Laboratory of the Ontario Veterinary College. For the most part losses resulting from outbreaks of Distemper can be controlled through the use of vaccines. However, outbreaks of "Aleutian" disease result in deaths to many of the affected mink as well as impairing the ability to breed and reproduce in affected mink that do not die. While research on this disease continues, no cure for it has yet been found.

A total of 505 Fur Farmer's Licences were issued in 1962. Of these 444 were renewals of previous licences, 56 were new and 5 licences were issued with retroactive provisions to legalize the operation of unlicensed ranches during the previous year.

SUMMARY OF BREEDING STOCK

Licensed Fur Farms, January 1st

	1958	1959	1960	1961	1962
Other Animals					
Beaver (Pens) -----	1	1	1	1	0
Beaver (S.C.) -----	0	0	0	0	0
Fisher -----	8	2	2	1	1
Marten -----	76	89	96	97	78
Muskrat (Pens) -----	2	0	0	0	0
Muskrat (S.C.) -----	45	0	0	0	0
Raccoon -----	33	24	22	20	13
Skunk -----	3	3	3	3	4
Fox					
Blue -----	57	83	94	97	57
Other -----	X12	X13	X14	X9	X1
Standard Silver -----	//150	//178	//292	//212	//130
Platinum -----	#186	#232	#280	#367	#355
Mink -----	119299	130294	142600	154626	164901

X Includes Cross, Red and White Fox

Includes Pearl Platinum Fox

// Includes White Marked Fox

COLOUR TYPE OF PELTS TAKEN FROM MINK DURING 1962

DARK AND HALF BLOOD DARK MINK, including Blufrost and Demi Buff	53,947
GREY TYPE such as Silverblu or Platinum, Sage, Opaline, B.O.S., Stewarts & Homos	16,405
DARK BLUE TYPE such as Aleutian, Blue Iris, Steelblu, B.O.S., Stewarts & Homos	25,456
LIGHT BLUE TYPE such as Sapphire, Winterblu, Erie, Violet, B.O.S., Stewarts & Homos	58,464
BROWN TYPE such as Pastel, Topaz, Ambergold, Buff, Dawn, Orchid, Capucine, B.O.S., Stewarts & Homos	175,219
BEIGE TYPE such as Palomino, Pearl, Lavender, Hope, Fawn, B.O.S., Stewarts & Homos	45,048
WHITE TYPE, including 95% White	9,934
TOTAL PELTS	384,473

The number of breeding mink kept as of January 1st, 1962 was an increase of 10,275 or 6.65% over the previous year. This, however, did not result in an increase in the total number of pelts produced for market in 1962.

Decreases were noted for Dark, Pastel and White type mink pelts while increases were noted in the Grey, Dark Blue, Light Blue and Beige types. The overall decrease was 4,508 pelts or 1.16%. It is particularly interesting to note that the types showing decreases sold well at advance prices, while types showing increases sold at prices below last year's levels. Again this year, the value of ranch-raised mink pelts produced on the 500 Ontario ranches is more than double the value of all the wild furs caught in the Province in 1962.

FIELD SERVICES

The management of the fish and wildlife resources of Ontario is conceived in the light of the following objectives, namely, sustained yield, full use, multiple use and public use. Application of biological principles is gradually leading to greater realization of economic and recreational values. In this context it is apparent that the law, expressed in statutes and regulations, is simply a means of achieving the objectives. Thus a very large responsibility rests upon the staff of conservation officers to insure that the public understands the background of the law. The fullest co-operation from all sportsmen is essential.

The prevention of violations is a primary concern of the conservation officer. Enforcement, then, comprises the whole range from providing information and explanations of the regulations to the process of prosecution in the courts.

An understanding of the kinds and frequencies of offences, as well as an understanding of human behaviour, are of great value to the enforcement officer. Further, the laws must give practical expression to the needs of people and to the varying conditions imposed by nature throughout the province.

The success of this approach is difficult to document, although the experience obtained with intensive management of the fur resource is indicative. From 1935-39 the average number of trappers licensed in Ontario was 5,605. Some 45 convictions were registered for trapping without a licence.

OFFENCES CONNECTED WITH TRAPPING IN TWO PERIODS

	1935 - 39		1955 - 60	
	Average Number of Convictions	Percent of Average Total of Convictions in a year	Average Number of Convictions	Percent of Average Total of Convictions in a year
Trap without a licence	45	4.2%	14	0.5%
All other fur offences	134	12.6	50	1.8

In the period 1955-60, an average of only 14 convictions were registered each year, at a time when there were 9,854 trappers licensed to participate in the fur harvest. In the earlier period, there was an average of 134 convictions a year for fur offences, but this was reduced to 50 in an average year after 1955. Even more significant, is the fact that during the period from 1935 to 1939, fur offences comprised about 17 percent of the total offences, but this was reduced to a little over 2 percent during the period 1955 to 1960.

The application of a zoning system in 1947, which covered all of the Crown lands of Ontario, together with an intensification of a management system in which trappers fully participated, is believed to be the main reason for a reduction in fur offences.

The present enforcement staff of 222 regular conservation officers can do little more than sample the population of sportsmen. The results of this, indicated by the number of convictions each year since 1955, are as follows:

1955-56	-----	2,895	Convictions
1956-57	-----	2,704	"
1957-58	-----	2,993	"
1958-59	-----	2,525	"
1959-60	-----	2,228	"
1960-61	-----	2,207	"
1961-62	-----	2,049	"
1962-63	-----	2,045	"

Field observations suggest that slightly more than 15 percent of the violations which actually occur result in prosecutions and convictions. The ideal might be to eliminate violations, but since this is obviously impossible, it is desirable to enunciate standards which would indicate a suitable level of law enforcement achievement. Actions which clearly demonstrate utter contempt for the law, and thus for the policies of society, must clearly be dealt with decisively, since such attitudes may seriously jeopardize the possibility of achieving the objectives of management.

With decreasing numbers of convictions during the last eight years, it would be pleasant to conclude that at last our public relations and education program was achieving the desired results. This conclusion would not take account of changes in the laws which have eliminated certain fishing offences, increasing participation by conservation officers in the biological phases of a growing management program, or the introduction of a mandatory forty-hour work week, without a corresponding increase in field staff. Nor would it take account of the fact that in the area most affected by changes in the fishery regulations, a sharp decline in numbers of convictions was soon followed by an upswing, as officers concentrated on other fishery violations.

The results of prosecutions during the last three years are summarized as follows:

	1960-61	1961-62	1962-63
Number of Seizures -----	2,424	2,050	2,186
Number of Convictions -----	2,160	2,019	2,045
Cases Dismissed -----	126	56	66
Convictions reported by the R.C.M.P. re Migratory Bird Regulations -----	47	30	34
Seizures, from persons unknown -----	139	37	58

Convictions for licence offences, particularly for hunting or fishing without a licence, but also loaning a licence, continues to constitute a major part of the enforcement record. Such offences do not affect the supply of game or fish, but are very important since, as a matter of principle, every sportsman should accept the responsibility of paying his share.

Comparison of Licence Offences During a Three-Year Period

	1960-61		1961-62		1962-63	
	Percent	Frequency	Percent	Frequency	Percent	Frequency
Fishing -----	183	8.5%	69	3.4%	81	4.0%
Hunting -----	482	22.3	311	15.4	358	17.4
Trapping -----	16	0.7	5	0.2	10	0.5
TOTAL -----	681	31.5	385	19.0	449	21.9

Percent frequency is based upon comparison with the total of all convictions in each year. While there has been a drop from 1960-61 to 1961-62 of almost 12 percent, in the year 1962-63 there has been a slight upward trend. The increasing interest of the public in outdoor recreation may mean increasing awareness of the need to be properly licensed. The reduction in this type of offence over a two-year period as compared with the situation in 1960-61 is gratifying.

Offences against the fishing regulations of frequent occurrence, (other than with respect to licences), were as follows:

1. Possessing an overlimit of fish -----	132
2. Angling with more than one line -----	81
3. Taking fish by means other than angling -----	64
4. Possessing fish in a closed season -----	59
5. Possessing a fish spear within 50 feet of the water's edge, during prohibited hours -----	38
6. Using a net without the authority of a licence -----	35
7. Taking fish during a closed season -----	30
8. Illegal possession of bait fish -----	22
9. Taking fish by means of set lines -----	10
10. Attempting to take fish by means of artificial lights -----	9

Hunting and trapping offences which occurred most often included:

1. Hunting during prohibited hours	290
2. (a) Possession of a loaded gun in a vehicle	288
(b) Possession of a loaded gun in a power boat	78
3. Possessing game in a closed season	82
4. Hunting during a closed season	54
5. Hunting with a shotgun, not plugged so as to be incapable of holding more than 3 shells	50
6. Attempting to jacklight deer	25
7. Possessing protected birds	22
8. Hunting or possessing firearms in a Provincial Park or Crown Game Preserve	21
9. Hunting carelessly	20
10. Hunting with a ferret	20

Conservation officers were assisted in enforcing regulations by more than 200 biologists, foresters, chief and deputy chief rangers, and more than 1,200 deputy game and fishery wardens. Once again, it is appropriate to express appreciation for the assistance given by officers of the Ontario Provincial Police Force. Officers of the Royal Canadian Mounted Police, whose duties include enforcement of such Federal Statutes as the Migratory Birds Convention Act and the Fisheries Act, together with the regulations made pursuant to these Acts, provided a major contribution to the Provincial fish and wildlife management program.

Equipment which is used in violation of The Game and Fish Act, the Ontario Fisheries Regulations or the Migratory Bird Regulations is seized by the conservation officer at the time of apprehension. Upon conviction such equipment is forfeited to the Crown, and the Minister may grant relief from forfeiture upon such conditions as he deems just. Articles which are confiscated for having been used in connection with serious offences, or for which no request has been made to have them restored to their owners, are sold at public auction. Four firearms sales and three fishing tackle sales were held in 1962. (Firearms which do not meet safety standards, but which can be repaired, are sold to gun dealers through sealed tenders.) A total of \$8,544.22 was realized and paid to the Treasurer of Ontario.

Fishing Tackle Sales

District	Date	Revenue	
Sudbury	May 5	\$ 497.00	
Aylmer	April 29	590.10	
Kenora	April 25	453.85	\$1,540.95

Firearms Sales

District	Date	Revenue	
Aylmer	Sept. 22	\$2,706.75	
Tweed	Sept. 15	1,635.50	
Kenora	Sept. 12	1,049.75	
Sault Ste. Marie	Sept. 14	1,444.77	\$6,836.77
Total Revenue of Sales			\$8,377.72

3% Sales Tax not included.

Re Sale of Repairable Firearms to Dealers, through sealed tenders	166.50
	\$8,544.22

Law Enforcement Training

An officer who will specialize in the training of conservation officer staff in law enforcement practices and techniques, court room procedure and other aspects of the law, was appointed on February 1, 1962.

Hunter Safety Training Program

The major purpose of the Hunter Safety Training Program is to reduce hunting accidents. A second purpose is to introduce the new hunter to a knowledge of game management.

The year 1962 is the second full year under the regulation which requires all new hunters to complete the course in order to purchase their first hunting licence. Courses are given by members of conservation and service clubs throughout the Province. There are more than 3,000 certified instructors donating their time to this worthwhile training. During the year, 15,082 students successfully completed the course. A total of 45,995 hunters have now obtained the fundamentals of safe gun handling under the Ontario Program.

During the last few years, a variety of organizations have conducted classes and the following table outlines the number of students, expressed as a percentage, each has trained:

Year	Ontario Federation of Anglers and Hunters	Conservation Clubs Outside Federation	Miscellaneous
1960	47%	24%	29%
1961	41	22	37
1962	35	24	41

The miscellaneous group includes such organizations as high school cadet corps, service clubs, Boy Scout Associations, church groups, cadet corps of the Armed Services, community centres and a number of individual instructors, especially in more remote areas.

It is too soon to evaluate the success of the Program in reducing the numbers of hunting accidents, although the table suggests that hunter training and a more conscious public is contributing to a decline in hunting accidents. This is particularly encouraging since the total number of hunters is increasing annually and now stands at more than half a million in Ontario. Nevertheless, there are still too many accidents and more effort will be given to the Program.

Year	Fatalities	Non-Fatal	Total
1960	36	118	154
1961	22	104	126
1962	17	109	126

Detailed information is collected by Department field officers and by the Ontario Provincial Police. The main causes of hunting accidents are reviewed in the following compilation:

CAUSE OF ACCIDENTS

	1960		1961		1962	
	F	NF	F	NF	F	NF
Mistaken for game -----	8	8	6	14	3	12
Shooter stumbled and fell -----	7	14	3	11		20
Victim out of sight of shooter -----		21	2	10		18
Victim covered by shooter swinging on game	2	14	2	13		5
Trigger caught on brush or other object	3	14		7		9
Victim moved in line of fire -----	2	10	4	5	5	11
"Horseplay" — did not know it was loaded, etc. -----	5	10	1	5	2	5
Removing weapon from or placing in vehicle and riding in vehicle with loaded firearm -----	1	6	1	7	1	5
Defective weapon -----		4		12	2	5
Crossing fence or other obstacle with loaded weapon -----	3	6	1	4	2	2
Miscellaneous -----	3	2	2	7		13
Loading and unloading -----	2	9		9	2	4
Totals -----	36	118	22	104	17	109

The kind of game being hunted in relation to the numbers of accidents may be of interest, although comparison is difficult due to lack of information concerning the relative numbers of hunters pursuing each type.

The game being hunted by the shooter at the time of the accidents was:

Species	1960	1961	1962
Rabbit -----	34	34	38
Grouse -----	34	21	28
Deer -----	23	17	15
Duck -----	15	13	11
Moose -----	11	9	8
Groundhog -----	11	6	13
Pheasant -----	4	5	4
Squirrel -----	1	3	3
Bear -----	1	1	2
Crow -----	1	—	1
Fox -----	—	1	—
Wolf -----	1	1	—
Unprotected Birds -----	3	3	—
Miscellaneous -----	5	3	2
Unknown -----	10	9	1
Totals -----	154	126	126

Disregard of the game laws has been associated with an alarming number of accidents. About 27% of the shooters involved in hunting accidents were contravening one or another of the laws and regulations. Altogether, 33 persons were charged under Section 66a of The Game and Fisheries Act, which creates the offence of careless hunting. Of these 33 persons charged, 28 were convicted and 5 were dismissed.

FISHERIES SECTION

Game Fish and Hatcheries Sub-Section

Public interest in sport fishing in Ontario continued at a high level in 1962. Although there is no way at present to accurately determine the number of anglers that fished in Ontario during the past year, it is evident from the several indices available that there was a definite increase in the popularity of the sport in most areas of the Province.

It is significant to note that the sale of non-resident angling licences increased from a total of 409,873 in 1961 to 426,775 in 1962. The total revenue from all angling licence sales, including Provincial Park and Organized Camp licences, increased from \$2,527,212.49 in 1961 to \$2,608,574.50 in 1962. Complete details on all fishing licence sales for 1962 together with comparable annual records for the previous three years are given in Table I.

The Provincial Park programme which continued to expand throughout 1962 was an added incentive to anglers to go afield. Statistics from the Parks Branch show that some seven million persons used park facilities during 1962 and that this constituted an increase of approximately 10 per cent in one year. These figures are believed to be indicative of the increased public interest and enthusiasm for most forms of outdoor recreation. Based on the results of a household survey conducted in 1959 and on subsequent increases in angling activity as noted annually, it is estimated that some two million anglers participated in Ontario's sport fishery in 1962.

Fact finding programmes relative to fisheries management were carried out in all of the twenty-two forest districts. The problems and the requirements of management vary considerably from district to district and work programmes are developed accordingly. A good deal of basic information on the condition and quality of the lakes and streams and on the health and strength of the various fish populations contained therein was collected by district personnel. In a number of projects, extensive fish tagging or fish marking programmes were undertaken to assess the status of the respective fish populations. Studies of present utilization and availability of fish to anglers were conducted on numerous waters and special short term investigations were carried out to collect information on other specific projects (i.e. pollution, fluctuations in water levels, spawning periods, etc.) as required.

In northern Ontario particularly, the construction of new access roads to remote areas provided new horizons for many interested anglers. While the development of such areas extended the range for investigation and management, the benefits derived from the improved access and, particularly, the resulting dispersal of fishing pressure, greatly facilitated and enhanced the use of the resource.

Hatcheries

The Department operated eighteen fish cultural stations in 1962. These included eight trout-rearing stations, six pond stations and four jar or trough hatcheries (including one sub-station at Normandale). The number and variety of fish produced in 1962 is summarized in Table II. An outline showing the total annual production and distribution by species and age group for the five-year period, 1958 to 1962, is also included as Table III.

All of the hatcheries, except the Chatsworth and Normandale trout-rearing stations, were operated at or near their normal carrying capacity. The renovation of the Chatsworth Hatchery restricted the production at this site but the recon-

Table No. 1

SALE OF ANGLING LICENCES

Type of Licence	1959		1960		1961		1962	
	Quantity	Revenue \$	Quantity	Revenue \$	Quantity	Revenue \$	Quantity	Revenue \$
Non-Resident -----	389,811	2,340,369.00	396,213	2,378,783.47	409,873	2,460,735.74	426,775	2,562,168.11
Non-Resident — Organized Camp --	5,487	10,974.00	4,893	9,786.00	6,202	12,404.00	6,533	13,066.00
Manitoba -----	4,849	14,748.00	5,133	15,600.25	6,303	19,111.50	—	—
Res. Prov. Park ----	10,739	32,591.00	10,275	31,200.75	11,425	34,651.25	10,880	33,017.50
Res. Prov. Park — Organized Camp --	930	930.00	241	241.00	310	310.00	320	320.00
TOTAL REVENUE		\$2,399,612.00		\$2,435,611.47		\$2,527,212.49		\$2,608,571.61

struction of the outside rearing facilities is near completion and the station will be ready for full scale production in 1963. At Normandale, the production of fish was curtailed mainly because of the poor condition of the hatchery building and the rearing ponds. Preliminary field work was initiated for the construction of a new hatchery building and a series of circular ponds at this location.

Fish culture operations at Kingsville Hatchery and at the Mount Pleasant and Ingersoll Pond stations were discontinued in 1962. The operation of these stations for the production of fish was terminated mainly because of the reduced need for whitefish and walleye eyed eggs and fry (Kingsville Hatchery) and for smallmouth bass fry and fingerling stock (Mount Pleasant and Ingersoll Pond) for restocking purposes. Brook trout was also produced at the Mount Pleasant station but, because of the general deterioration of the volume and quality of the water supply in recent years, its use for this purpose became of little practical value. Following the closure of this station for fish production, the property was used as an experimental public fishing area (see section on special projects).

Two hundred thousand lake trout eyed eggs were secured this year from the Manitoba Government in exchange for one hundred thousand brook trout eyed eggs and one hundred thousand maskinonge fry supplied from Dorion and Deer Lake Hatcheries respectively. Two additional lots of one hundred thousand maskinonge fry were also supplied to the National Parks Branch of the Federal Government and to the Fish and Game Department of the Province of Quebec from the Deer Lake Hatchery.

A number of special projects were undertaken in the field of hatchery operations during the current year. The most important of these included:—

WALLEYE POND CULTURE

This study was initiated at the White Lake pond station in 1961 to investigate the practicability of culturing walleye to the fingerling stage in hatchery ponds. The results from this project to date have been very encouraging. An apparent relationship was found between survival and the length of time elapsing from the onset of cannibalism. By improving the technique in culture and harvest accordingly, the rate of survival of the fish was improved and the average cost per fingerling was reduced from 2.3 cents per fish in 1961 to 0.7 cents per fish in 1962, which is equal to or less than the cost quoted by other agencies for the culture of fingerling size walleye.

EFFECT OF LIGHT ON TROUT EGGS DURING INCUBATION

Preliminary studies were undertaken at the Chatsworth trout rearing station to investigate the effect of various forms of artificial fluorescent lighting and natural light on the incubation of lake trout egg stocks. No significant difference was found among the various lots incubated under the different lighting conditions used. However, the study is to be continued with other species of trout (i.e. rainbow and brook) in the future.

EFFECT OF WATER TEMPERATURE ON THE LAKE TROUT EGGS DURING INCUBATION

Studies were initiated at the Wiarton, Chatsworth and Tarentorus Hatcheries to investigate the effect of different water temperatures on the survival of lake trout during the period of egg incubation and early stage of fry development. Initial results from these practical experiments indicated that the higher temperature of spring water supplies (Chatsworth and Tarentorus) may adversely affect the survival of lake trout, at least during the period of development in the egg stage. This study is to be continued.

Table II FISH DISTRIBUTION FROM ONTARIO PROVINCIAL HATCHERIES FOR 1962

HATCHERY	Brook Trout	Lake Trout	Rainbow Trout	Largemouth Bass	Smallmouth Bass	Maskinonge	Whitefish	Walleye	Splake
Chadsworth (TRS)	88,470 Y	—	—	—	—	—	—	—	—
Codrington (TRS)	42,180 Y	38,000 Y	25,900 Y	—	—	—	—	—	—
Deer Lake (PS)	108,750 Y	10,000 Y	—	—	—	2,970,000 F 23,550 Fg	—	75 Fg	—
Dorion (TRS)	488,500 EE 364,500 Fg 16,192 Y 850 A	10,000 Fg 282,155 Y	—	—	—	—	—	—	—
Hill Lake (TRS)	189,827 Y 38,800 A	54,312 Y 590 A	60,300 Fg 23,548 Y	—	—	—	—	—	—
Little Current (JH)	—	—	—	—	—	46,575,000 F 16,500 000 EE	—	—	—
Midhurst (PS)	—	—	—	—	—	—	—	—	—
Mount Pleasant (PS)	—	—	28,000 Y 8,650 A	20 A	—	—	—	—	—
Normandale (TRS)	29,700 Y	—	—	—	—	—	—	—	—
North Bay (TRS)	92,400 Y 15,500 A	48,500 Y	—	—	—	—	—	—	—
Pembroke (TRS)	61,300 Fg 164,800 Y	91,500 Fg	—	—	—	—	—	—	—
Port Arthur (TH)	—	—	—	—	—	—	—	—	—
Sandfield (PS)	191,900 Y	28,925 Y	37,975 Y	—	147,000 F 32,000 Fg 163 A	—	—	—	111,792 Y
Skeleton Lake (PS)	1,000 Fg 100,500 Y	12,000 Fg 69,000 Y	78,800 Y	—	34,200 Fg 128 A	—	—	—	—
Tarentorus (TRS)	224,500 Fg 256,400 Y 19,295 A	295,000 Y 128 A	9,935 Y	—	—	—	—	—	—
Westport (PS)	66,330 Y	14,840 Y	14,500 Y	55,000 F 72,300 Fg	37,600 Fg	—	—	—	—
White Lake (PS)	249,600 Y	13,000 F 143,000 Y 126,800 Fg	72,500 Y	39,820 Fg	73,500 Fg	—	—	4,000,000 EE 8,994,000 F 200,995 Fg	—
Warton (TH)	—	—	—	—	—	—	—	—	—

OTHER SPECIES: 53,280 Atlantic Salmon (Ouananiche) eggs were distributed from North Bay Hatchery.
1,247 Aurora Trout fingerlings were distributed from Hill Lake Hatchery.
500 Grayling adults were distributed from Dorion Hatchery.

NOTE: TRS—Trout Rearing Station
PS—Pond Station
JH—Jar Hatchery
TH—Trough Hatchery
EE—Eyed Eggs
F—Fry
Fg—Fingerlings
Y—Yearlings
A—Adults

Lake Trout Rehabilitation

The lake trout rehabilitation programme for Lake Superior was continued in 1962. This year an estimated total of 508,175 marked lake trout yearlings were planted in Lake Superior from Dorion and Tarentorus trout rearing stations. Approximately 258,175 fish, marked by the removal of the adipose and right ventral fins, were planted in the Rossport - St. Ignace Island area from the Dorion station. The remainder of the stock, estimated at 250,000 fish, were marked by the removal of the adipose and left ventral fins and planted along the shoreline between the Montreal River and Coldwater Creek from the Tarentorus Hatchery.

Private Hatcheries

Nineteen private hatchery operators were issued permits by the Department to sell various game fish species for restocking purposes. These permits, which were provided free of charge, authorized the sale of game fish for restocking only after the proposed planting was approved by the Department.

Fifteen of the nineteen permittees sold fish but the majority of the sales were made by four of the larger establishments.

A summary showing the number of plantings and the number of fish stocked by private hatcheries in 1962 is as follows:

SUMMARY OF THE DISTRIBUTION OF FISH FROM PRIVATE COMMERCIAL HATCHERIES, 1962

Species	Number of Plantings	Number of Fish	Age Class
Brook Trout -----	18	71,250	Fry
	146	423,360	Fingerlings
	86	39,367	Yearlings
	59	14,677	Adults
Rainbow Trout -----	7	23,000	Fry
	9	11,430	Fingerlings
	47	7,304	Yearlings
	24	2,486	Adults
Largemouth Bass -----	11	498	Yearlings
	5	79	Adults
Smallmouth Bass -----	1	200	Fingerlings
Bluegills -----	7	1,400	Yearlings

Special Projects

I. NET SECTION

The netting crews operating from Maple conducted test netting projects in various district waters with assistance from local field personnel. Impounding gear (trap nets and hoop nets) were used exclusively and all sport and commercially valuable fish were returned to the water after relevant data were recorded. Investigation of fish populations in Sand Lake, Kemptville District; Point au Baril area of Georgian Bay, Parry Sound District; and Rice, Buckhorn,

Table III

FISH DISTRIBUTION FROM 1958 TO 1962

Species of Fish	Number Of Fish Planted				
	1958	1959	1960	1961	1962
Black Bass, Largemouth					
Fry -----	46,000	45,000	230,550	—	55,000
Fingerling -----	62,600	46,500	29,500	25,250	112,120
Yearling and Adult -----	1,035	144	20	178	20
Black Bass, Smallmouth					
Fry -----	130,000	89,000	156,000	230,000	147,000
Fingerling -----	132,750	227,200	177,600	270,200	177,300
Yearling and Adult -----	4,468	499	510	619	291
Char, French Alpine					
Yearling -----	2,400	—	—	—	—
Adult -----	5,330	—	345	—	—
Grayling, Arctic					
Yearling -----	—	26,500	—	—	—
Adult -----	—	—	—	—	500
Herring					
Eggs -----	—	1,067,750	—	—	—
Fry -----	—	—	50,000	—	—
Maskinonge					
Fry -----	2,940,000	4,070,000	3,390,000	2,832,500	2,970,000
Fingerling -----	17,512	50,450	51,405	74,500	23,550
Adult -----	501	—	—	—	—
Ouananiche					
Eggs -----	—	—	—	—	53,280
Adult -----	—	—	660	—	—
Walleye					
Eggs -----	56,245,000	30,875,000	53,790,000	27,065,000	20,500,000
Fry -----	—	3,040,000	3,600,000	—	8,994,000
Fingerling -----	280	—	—	66,923	201,070
Adult -----	400	—	—	—	—
Salmon, Kokanee					
Yearling -----	—	—	250	—	—
Splake					
Yearling -----	207,710	135,047	13,151	97,068	111,792
Adult -----	—	1,204	—	5,640	—
Trout, Aurora					
Fingerling -----	—	2,314	2,000	—	1,347
Yearling -----	—	—	—	1,300	—
Trout, Brook					
Eggs -----	—	580,000	49,000	30,000	493,500
Fry -----	—	—	15,000	—	—
Fingerling -----	788,900	455,160	863,925	763,625	651,300
Yearling -----	2,079,395	1,807,855	1,615,960	2,051,875	1,655,249
Adult -----	9,586	84,294	76,481	72,562	75,445
Trout, Brown					
Fingerling -----	21,800	—	1,700	640	—
Yearling -----	132,926	192,795	85,380	5,000	—
Adult -----	235	12	79	—	—
Trout, Lake					
Eggs -----	4,800	—	—	—	—
Fry -----	—	40,000	—	43,700	13,000
Fingerling -----	373,500	274,400	389,125	369,500	240,300
Yearling -----	832,409	633,990	653,065	714,670	988,732
Adult -----	9,000	—	115	8,278	718
Trout, Rainbow					
Eggs -----	26,000	20,000	—	3,000	—
Fry -----	10,000	—	—	—	—
Fingerling -----	15,000	19,517	28,120	101,896	60,300
Yearling -----	94,944	95,036	79,090	229,375	291,158
Adult -----	32,297	1,400	122	—	8,650
Whitefish					
Eggs -----	30,940,000	1,000,000	12,000,000	13,875,000	—
Fry -----	47,515,000	44,985,000	62,993,000	53,685,000	46,575,000
Total -----	142,681,778	89,866,067	140,342,153	102,623,299	84,400,622

NOTE: Figures are compiled on a calendar year.

Cameron and Balsam Lakes, Lindsay District, were conducted in 1962. Fishing operations were also carried out for the collection of fish for the Mount Pleasant Public Fishing Area, the Canadian National Exhibition and the Canadian National Sportsmen's Show, and for the collection of lake trout spawn from Lake Simcoe and Lake Manitou.

The net staff based at Port Arthur conducted projects on Burchell Lake, Dog Lake and Loch Lomand in the Port Arthur District. Instruction in the use of trap nets was given to commercial fishermen on Rainy Lake in the Fort Frances District and nets were operated in the Kenora District during the fall of 1962 for the taking of lake trout eggs.

2. PATRICIA INVENTORY

The purpose of the study is to obtain information on the larger, more important bodies of water in the Patricia area with respect to the quality of the environments (physical and chemical condition of the waters) and to the productivity of the respective waters for game and/or commercial species of fish.

This fact finding programme which was initiated in 1959 was continued and expanded in 1962. Biological survey work was conducted on Big Trout, Sandy, Wunnummin, Attawapiskat, St. Joseph and the Sakwaso-Nikip group of lakes during the current year. Further short term surveys were completed in less detail on a number of smaller lakes by Sioux Lookout district staff.

3. MOUNT PLEASANT PUBLIC FISHING AREA

The site of the former fish hatchery at Mount Pleasant was reopened and operated as a public fishing area for the first time in 1962 on an experimental basis. The seven ponds, each about an acre in size, were liberally stocked with such species as bullheads, rock bass, sunfish, perch and lesser amounts of channel catfish, largemouth and smallmouth bass. Public fishing was permitted free of charge. The station was open daily, except Tuesdays, from 8 a.m. to 8 p.m. during the period May 12th to September 28th inclusive.

The results from the operation were very gratifying. Many family groups took advantage of the facilities and most appeared to enjoy their visit to the area. A total of 14,432 anglers participated in the fishing.

4. LAKE OF THE WOODS FISH MANAGEMENT UNIT

This unit, which consists of one biologist and two fisheries workers, was established in 1962 to undertake the survey of the lake and the fish population contained therein.

During the first year of operation, work was carried out on Shoal Lake, a large bay located at the northwest end of Lake of the Woods.

5. KAWARTHA LAKES FISH MANAGEMENT UNIT

This unit was established in the fall of 1962. One biologist and one fisheries officer was assigned to the unit.

The first operation of the unit involved the harvest and tagging of bass and maskinonge from Nogies Creek for transfer and planting in Pigeon and Sturgeon Lakes.

6. FISH POPULATION STUDIES

Four major fish population studies were initiated in 1962. These include Rainy Lake, Lake Nipigon, Lake St. Lawrence and the Pointe au Baril area of Georgian Bay.

These studies were chiefly concerned with the collection of information on the productivity of the waters and the distribution, abundance and growth of the existing fish populations.

7. OUANANICHE SALMON PROJECT

This project was initiated on Trout Lake, North Bay District, in 1962. The purpose is to obtain information on the life history and the habitat requirements for this popular game fish in Trout Lake. With this information at hand, it is hoped that the species may be successfully introduced to other suitable waters.

Regulations

No major changes were made in the Ontario Fishery Regulations for 1962. However, the following amendments are of general interest:

- (a) As a result of a reciprocal agreement, residents of Manitoba and Saskatchewan are now permitted to angle in Ontario waters without an angling licence, except in designated Provincial parks.
- (b) The daily creel and possession limit for rainbow trout taken during the fall season in waters described in Schedule 3 was increased from two to five fish per day.
- (c) The opening of the largemouth and smallmouth bass season was advanced from June 10th to May 12th for the boundary waters between Minnesota and Ontario.

THE COMMERCIAL FISHERY

The total catch of fish reported by the Ontario commercial fishery in 1962 was 63,783,597 pounds. This total exceeded the 1961 landings by 8,829,963 pounds, or 16 per cent, and was about four million pounds greater than the catch in the record year of 1956.

The value to the fishermen of these fish before processing was reported at \$5,341,200.00. In spite of the increase in landings in 1962, however, the total value decreased by over \$400,000.00 from that of the previous year. The average price per pound for all species, as a consequence, was only 8.4 cents which can be attributed largely to the continued high percentages of yellow perch and smelt in the catch. Over one-third of Ontario landings was yellow perch selling at an average price of 6.2 cents per pound and nearly one-third was smelt with an average price of 3.5 cents per pound. Prices for species such as sturgeon, yellow pickerel, whitefish and lake trout were relatively good during the year but their total contribution to the catch was less than 15%.

The changes that have occurred in the composition of the commercial catch over the past five years have resulted in technological adjustments by the fishing industry. In Lake Erie, trawling became the accepted method of catching smelt. During 1962 nearly 17 million pounds of these small but desirable fish were taken in this manner. A trawling experiment in Lake Superior for herring was also carried out successfully during the year.

Comparison of the table of fishing equipment for 1962 with that of the previous year shows no significant changes. About 3,000 persons are reported as engaged in the fishing industry at the primary level. Many others are employed either full-time or part-time in processing, packing and shipping the fish and in the supply services. The total investment in the Ontario fishery, again largely at the primary level, amounts to about ten million dollars. Over 1,750 fishing boats were used by the fishery, of which some 1,100 were small outboard-powered craft and canoes. In the more northerly rivers and lakes, large, sturdy canoes, powered by five to ten-horsepower motors, are the usual fishing craft of the fishermen, largely Indians.

The number of fishing licences issued by the Department in 1962 remained relatively stable at 4,554 with a few increases in some classifications offset by corresponding decreases elsewhere so that the net result was a decrease of nine from 1961. In a few areas where fishing success has been severely reduced by the sea-lamprey, fishermen continue to hold licences and carry out minimum operations with the expectation of a return of better fishing conditions but many of these licencees are by necessity forced to turn to other industry for a part of their income.

The sea-lamprey control programme, as in 1961, continued to provide hope for success. Reports by the agencies responsible for the lamprey control to the Great Lakes Fishery Commission have indicated an apparent 80% reduction in the numbers of this predator in Lake Superior. The numbers of lake trout able to reach marketable size, as a consequence, have shown some increase. Meanwhile the rate of planting of trout has been increased in an effort to speed up the rehabilitation of this valuable species.

During 1962 the first control of lake trout production by a quota system was inaugurated by the Department in response to a request of the Commission. The Commission recommended:

“that the 1962 harvest of lake trout in Lake Superior be limited to the fishing effort required to support necessary biological studies and suggested that agencies act to accomplish this objective through appropriate procedures available to them.”

and the quotas set were based on this recommendation. While reduction in fishing effort may result in temporary reduction of lake trout catches it is anticipated that the result will be beneficial in the long term to the fishery due to more rapid recruitment.

Fluctuations in the yield of the fisheries, both with respect to species and area are of interest. Smelt production rose 48% with an increase of over six million pounds in the Lake Erie fishery. Yellow perch, also due principally to Lake Erie landings, increased 16%. A 42% increase in lake herring is noted with a gain of three-quarters of a million pounds in Lake Superior production. Lake trout taken in the Province was up 14% with increased catch from both Lake Superior and northern inland lakes. Similarly, saugers showed a 24% increase from Lake Superior and the north. Whitefish production, on the other hand, dropped 7% due to sharp decreases in catch from Lake Huron and Lake Ontario, although landings increased 17% in the northern inland area. Chub production, mainly from Lake Huron, decreased 6%. White bass decreased 27% with a drop of a million pounds noted in the Lake Erie figures. Decrease in sturgeon from the main areas of production caused a 32% drop in the Provincial production.

In summary, a 24% increase in production was seen in Lake Erie and a

33% increase in Lake Superior. A 25% decrease was noted for the Lake Huron fishery and 17% for Lake Ontario. Changes in other areas were of little significance.

Changes in the value of the catch from the nine areas of the Province paralleled production with the exceptions of Lake Erie, where the 25% increase in landings was accompanied by a 6% drop in value, and the North Channel of Lake Huron where a slight increase in catch and a lower value were noted.

COMPARATIVE STATEMENT OF THE PRODUCTION OF THE FISHERIES IN THE PROVINCE OF ONTARIO

Fishing Area	1961 lbs.	1962 lbs.	Increase lbs.	Decrease lbs.
Lake Erie -----	35,697,640	44,464,971	8,767,331	
Northern Inland -----	7,965,713	8,571,510	605,797	
Lake Huron -----	4,758,777	3,574,971		1,183,806
Lake Superior -----	2,353,036	3,146,466	793,430	
Lake Ontario -----	2,108,796	1,750,182		358,614
Lake St. Clair -----	877,045	1,031,411	154,366	
Southern Inland -----	745,663	643,954		101,709
Georgian Bay -----	201,532	347,960	146,528	
North Channel -----	245,532	252,172	6,640	
TOTAL -----	54,953,634	63,783,597		
NET INCREASE -----			8,829,963	

VALUE BY FISHING AREA

Fishing Area	1961 \$	1962 \$	Increase \$	Decrease \$
Lake Erie -----	2,506,707.14	2,352,506.77		154,200.37
Northern Inland -----	1,018,588.54	1,170,726.97	152,138.43	
Lake Huron -----	1,204,209.52	802,485.74		401,723.78
Lake Ontario -----	396,520.00	331,223.73		65,296.27
Lake Superior -----	214,184.07	239,289.27	25,105.20	
Lake St. Clair -----	184,239.18	207,282.26	23,043.08	
Georgian Bay -----	61,346.28	94,658.55	33,312.27	
Southern Inland -----	86,491.34	74,646.33		11,845.01
North Channel -----	73,596.65	68,380.56		5,216.09
TOTAL -----	\$5,745,882.72	\$5,341,200.18		
NET DECREASE --				\$404,682.54

COMPARATIVE STATEMENT OF THE YIELD OF THE FISHERIES IN THE PROVINCE OF ONTARIO

Species	1961 lbs.	1962 lbs.	Increase lbs.	Decrease lbs.
Perch (Yellow) -----	18,608,783	21,639,223	3,030,440	
Smelt -----	13,064,590	19,314,275	6,249,685	
Yellow Pickerel -----	3,382,032	3,707,625	325,593	
Whitefish -----	3,907,294	3,639,722		267,572
Chub & Tullibee -----	2,992,185	2,825,094		167,091
Lake Herring -----	1,853,238	2,630,092	776,854	
White Bass -----	3,412,916	2,491,445		921,471
Suckers -----	1,595,056	1,540,072		54,984
Carp & Carp Roe -----	1,312,499	1,124,281		188,218
Sheepshead -----	1,200,668	1,116,956		83,712
Northern Pike -----	989,721	975,934		13,787
Ling -----	637,545	623,273		14,272
Bullheads -----	363,115	422,779	59,664	
Catfish -----	244,142	314,633	70,491	
Sunfish -----	271,197	256,919		14,278
Lake Trout -----	181,029	207,558	26,529	
Rock Bass & Crappies -----	118,712	137,463	18,751	
Sturgeon -----	194,638	132,948		61,690
Saugers -----	105,385	130,699	25,314	
Eels -----	127,439	128,006	567	
Gold Eyes -----	23,646	34,459	10,813	
Menominee -----	21,833	31,290	9,457	
White Perch -----	18,753	20,143	1,390	
Caviar -----	2,135	1,586		549
Blue Pickerel -----	2,435	405		2,030
Alewife; Dogfish; Gar; Shad and Unclassified "Mink Food" ---	322,648	336,717	14,069	
TOTAL -----	54,953,634	63,783,597		
NET INCREASE -----			8,829,963	

COMPARATIVE STATEMENT OF THE NUMBER OF COMMERCIAL FISHING LICENCES ISSUED IN THE PROVINCE OF ONTARIO

Type of Licence	1961	1962	Increase	Decrease
Gill Net -----	1,063	1,060		3
Pound & Trap Net -----	132	148	16	
Hoop Net -----	242	234		8
Coarse Fish Seine -----	107	100		7
Baited Hook -----	205	199		6
Dip Net -----	18	21	3	
Trolling -----	17	18	1	
TOTAL -----	1,784	1,780		
Bait-fish Seine, Trap & Dip -----	2,181	2,133		48
Bait-fish Dealer's -----	510	557	47	
Bait-fish Preserving -----	88	84		4
TOTAL -----	2,779	2,774		
ALL LICENCES -----	4,563	4,554		
NET DECREASE -----				9

QUANTITIES OF FISH TAKEN (POUNDS) IN THE PUBLIC WATERS OF ONTARIO BY THE FISHING INDUSTRY
in the year ending December 31, 1962

Species	Lake Ontario	Lake Erie	Lake St. Clair	Lake Huron	Georgian Bay	North Channel	Lake Superior	Northern Inland	Southern Inland	Total Catch	Total Value
Blue Pickerel	23	382								405	\$ 131.07
Bullhead	181,034	54,384	21,269			300		37,223	128,569	422,779	63,799.31
Carp	248,398	160,801	306,344	22,779	20,822	1,399		113	363,625	1,124,281	86,116.99
Catfish	21,791	175,596	86,107	15,189	2,806	25		6	12,813	314,333	61,522.16
Chub; Tullibee	300			2,180,123	81,515	110	69,076	494,270		2,825,394	458,117.08
Bels	125,038	262			5						
Lake Herring	27,157	2,160		24,632	1,198	108	2,569,502	5,385	2,701	128,006	15,782.05
Lake Trout	670				135	31	69,587	137,135		2,630,092	68,505.58
Ling	7				287	500		3,193		207,558	72,911.69
Northern Pike	50,550	2,455	27,470	775	9,718	30,023		617,517	1,829	623,273	3,493.92
Perch (Yellow)	95,948	20,858,891	11,451	682,585	6,453	31,358	1,694	849,580	3,659	975,934	80,141.01
Menominee	250			8,737	379	11,726	24,003	21,284	7,250	21,639,223	1,342,898.60
Suckers	65,482	63,046	115,894	73,381	28,954	41,787	10,098	105		31,290	4,005.02
Rock Bass & Crappies	24,433	35,389	32,291			1,745	21,338	1,086,411	43,799	1,540,072	20,382.68
Saugers	512		409	63				36,944	6,661	137,463	25,364.45
Sheepshead	18,398	1,036,736	18,649	30,145	1,451		51,542	78,173		130,699	26,632.80
Smelt	202,302	19,107,544		173	216		1,000	9,109	2,468	1,116,956	24,392.95
Sturgeon	9,001	2,270	13,276	6,857	2,461	9,013	2,915		3,040	19,314,275	676,332.89
Oxeye	4		338	413	103			78,927	8,228	182,948	130,985.89
Whitefish	112,225	44,108	45,608			157		669	54,821	1,586	5,241.38
White Bass	79,250	2,348,841	43,031	17,411				1,051		256,919	26,390.94
Whitefish	354,651	9,865		349,103	130,082	103,679	148,092	2,544,250	1,811	2,491,445	277,541.20
Yellow Pickerel	106,442	283,808	259,893	262,605	61,375	20,152	174,491	2,538,859	3,689,722	3,707,625	845,380.65
Goldeyes								34,459		3,707,625	1,016,240.23
White Perch	20,143									4,306.10	866.15
Alewife, Dogfish & Mink Food	6,173	278,433	49,331						2,700	20,143	
TOTAL CATCH	1,750,182	44,464,971	1,031,411	3,574,971	347,960	252,172	3,146,466	8,571,510	643,954	63,783,597	
TOTAL VALUE	\$331,223.73	\$2,352,506.77	\$207,282.26	\$802,485.74	\$94,658.55	\$68,380.56	\$239,289.27	\$1,170,726.97	\$74,646.33		\$5,341,200.18

EQUIPMENT OF THE FISHING INDUSTRY IN ONTARIO for the year ending December 31, 1962

	Lake Ontario	Lake Erie	Lake St. Clair	Lake Huron	Georgian Bay	North Channel	Lake Superior	Northern Inland	Southern Inland	Totals
NUMBER OF MEN										
FISHING BOATS										
40 feet and over	337	660	88	206	110	71	161	1,221	189	2,993
No.	4	109		44	28	6	17	10		218
Tons	32	2,122		798	348	41	306	124		3,771
Value	\$14,500	1,744,728		534,583	282,568	46,000	177,100	92,100		\$2,891,579
20 to 39 feet	82	109	22	16	40	13	55	84	3	424
Value	\$94,225	337,895	38,400	53,436	125,000	21,550	115,550	100,833	1,360	\$888,289
Under 20 feet	227	70	46	6	29	31	40	572	88	1,109
Value	\$54,104	27,580	14,765	1,750	12,153	7,400	14,425	213,541	12,727	\$358,445
FISHING GEAR										
Gill Net	919,390	4,040,180		1,465,800	934,850	306,130	712,499	985,690	29,600	9,344,139
Value	\$221,551	1,256,336		385,505	202,253	49,025	191,712	256,216	7,300	\$2,575,898
Pound Nets	No.	270	316	13	56	90	10	41		706
Value		\$184,500	85,700	6,300	105,100	17,100	10,300	33,826		\$442,826
Trap Nets	No.	424		145		3	1	23		597
Value	\$900	298,400		99,852		1,500	150	7,015		\$407,817
Hoop Nets	No.	1,005	10					78	548	1,767
Value	\$60,830	18,320	400					6,705	27,898	\$114,153
Seine Nets	No.	18	18	1	1				23	103
Yards	2,243	8,505	3,700	10	100				2,450	17,008
Value	\$3,319	28,170	5,425	10	25				5,740	\$42,689
Night Lines	21,900	8,900	17,500					15,650	4,100	68,050
Value	\$2,778	2,531	3,332					1,579	390	\$10,610
Dip Nets	2	3							6	11
Value	\$15	12							49	\$76
Trolling Lines	32									32
Value	\$666									\$666
Trawl Nets	No.	91							91	
Value		\$73,473								\$73,473
SHORE INSTALLATIONS										
Freezers and Ice Houses	23	33	12	27	35	14	48	323	10	525
Value	\$12,285	636,310	13,050	88,200	49,150	10,450	42,105	178,545	5,250	\$1,065,345
Piers & Wharves	38	65	18	16	53	14	53	285	5	497
Value	\$9,105	77,880	14,024	10,575	58,300	6,700	17,010	65,122	415	\$259,131
Net Sheds	140	175	26	49	48	19	83	161	25	726
Value	\$70,430	482,720	32,150	101,400	58,450	16,250	55,815	67,012	11,130	\$896,357
TOTAL VALUE	\$550,708	5,168,855	207,246	1,291,611	892,999	175,975	624,167	1,022,494	72,249	\$9,996,304



Cutting a fire line in Sioux Lookout Forest District.



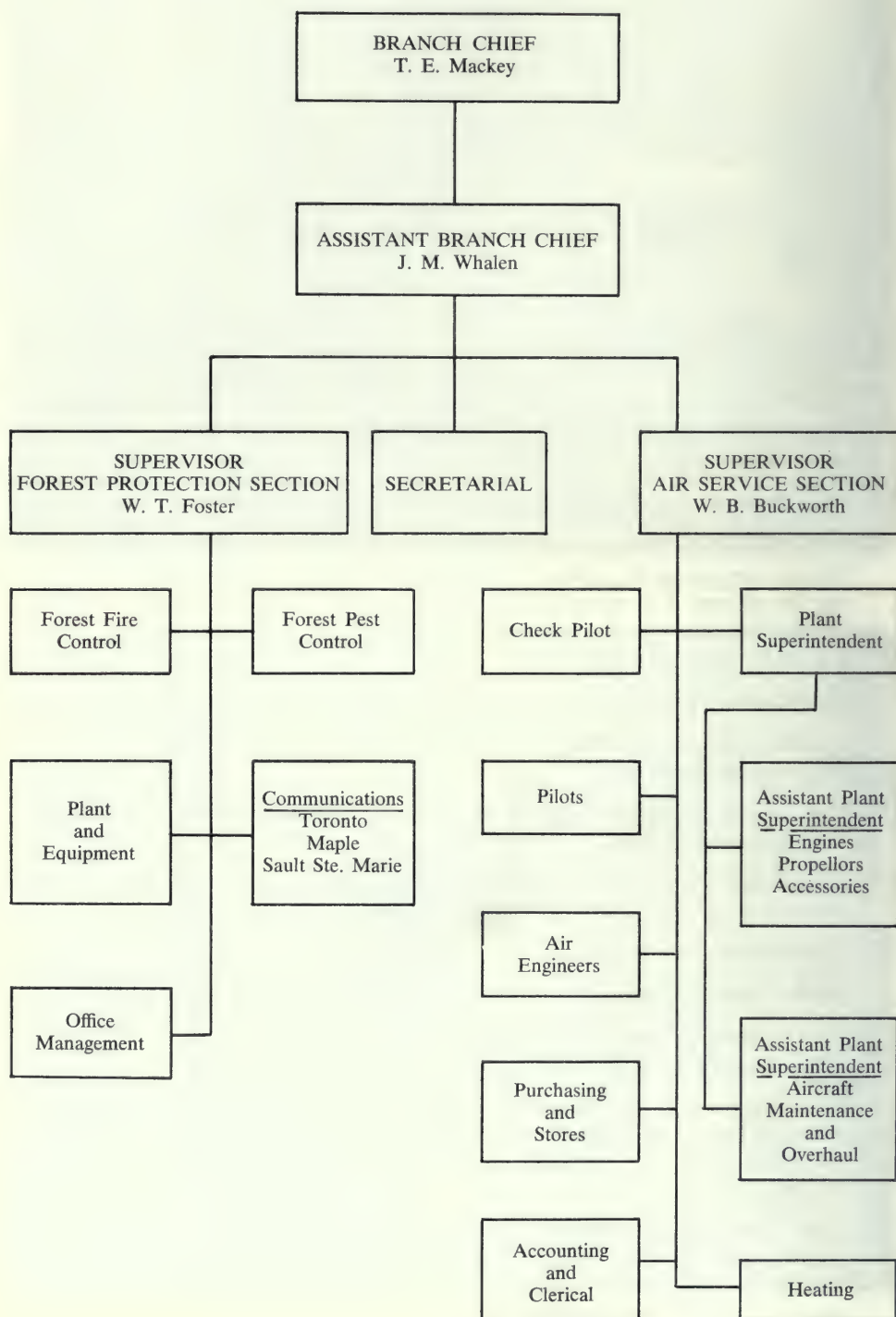
An Otter aircraft, dropping water over a fire.

FOREST PROTECTION BRANCH

THE Forest Protection Branch is comprised of two Sections: Forest Protection, with headquarters in Toronto; and Air Service, with headquarters in Sault Ste. Marie. The responsibilities and functions of the Branch are as follows:

1. Forest Fire Control Organization, staff distribution, fire district boundaries, fire warden system.
2. Fire Control Planning, preparation and implementation of fire control plans.
3. Fire Prevention, through removal of hazards, construction of fire guards, and travel, fire and work permits. Warnings to the public of existing and impending fire danger. Co-operation with Department of Transport, Railways, Indian Affairs Branch, Woods Operators and other forest users in preventing, reporting and suppressing fires.
4. Detection of forest fires by a system of towers and aircraft patrols.
5. Training of staff, woods industry employees and other co-operators in fire suppression techniques.
6. The use of prescribed burning to eliminate hazards, and for various forest management purposes.
7. Forest fire suppression by co-ordinating movement of resources between regions as required and emergency arrangements.
8. Fire statistics and reports.
9. Radio communications for fire control and all other Department requirements.
10. Pest Control by prevention of damage to trees caused by insects, disease and small mammals on all lands under Department management.
11. Maintenance and operation of the aircraft fleet in compliance with Department of Transport Regulations and to provide for the utmost safety. Selection of all technical staff including pilots and engineers. Leasing and disposition of helicopters.
12. Plant and equipment program for the Department including all building and improvement projects, major equipment including vehicles. Vehicle and building records, maintenance procedures, specifications, licensing and insurance. Equipment development.

FOREST PROTECTION BRANCH



FOREST PROTECTION SECTION

Forest Fire Control

During the 1962 fire season, 1,521 fires occurred, burning a total of 13,804 acres. The total number of fires was 15% above the average for the previous decade (1952 to 1961 inclusive).

The area burned was the third lowest on record. The two years with a smaller area burned were 1952 and 1959, during which 12,421 acres and 5,281 acres, respectively, burned.

The period of highest fire occurrence was from June 30th to July 19th. In this 20-day period 404 fires were reported, 42 of which occurred on July 19th. Most of these fires were located in the central and southern portion of the province. Northwestern Ontario experienced a below normal season both from the standpoint of fire occurrence and area burned.

A number of high to extreme fire danger periods developed during the 1962 fire season, but, with the exception of the July period mentioned, all were of relatively short duration. This condition contributed to the high fire occurrence and low area burned record for the year.

Fire Frequency by Cause. Lightning accounted for 20% of all fires reported during the 1962 fire season. This is six per cent lower than the decade average for 1952 to 1961, inclusive.

Prosecutions and Convictions. A total of 48 charges were laid under the Forest Fires Prevention Act and Regulations, resulting in 43 convictions.

FOREST FIRE SUPPRESSION

Water dropping from Department aircraft again played an important role in bringing many fires under control. This was particularly true during the high fire occurrence period in July that has already been mentioned. For the first time, a large helicopter, a Vertol H-21A, was successfully used to water drop on fires.

FIRE CONTROL TRAINING

A comprehensive new "fire control training" programme was launched in 1962 under the Department "Fire Control Training Officer". Two "bush" fire schools were established, one at Cedar Lake in the Kenora area and the other at Racine Lake near Chapleau. Forty-four staff members graduated from the special four-week courses that were conducted. This is the first phase of the programme which will include courses for all Department supervisory personnel and key co-operators in the forest industries. This programme is designed to improve the efficiency of forest fire fighting throughout Ontario.

PRESCRIBED BURNING

A number of prescribed burns were carried out in Ontario during 1962 to eliminate certain hazards and for various forest management purposes. The controlled use of fire is receiving recognition as an important forestry tool. A total of 16 experimental burns on 2,200 acres of forest lands were conducted during 1962.

Forest Insects and Diseases

Forest insect and disease problems in Ontario are shared co-operatively with the Forest Entomology and Pathology Branch of the Canadian Department of Forestry. The Province is responsible for initiating and conducting all control operations on lands under its jurisdiction, and the federal government conducts the surveys and research work on which control decisions are based.

SURVEYS

Each year, this Department participates to a large extent in the Ontario portion of the Canada-wide Forest Insect and Disease Survey of the Federal Department of Forestry. Detailed information concerning the occurrence and distribution of specific forest insects and diseases is contained in the Annual Report of the Forest Insect and Disease Survey.

The outbreak of spruce budworm in northwestern Ontario showed distinct indications of weakening and declined in over-all area to about 5,500 square miles. Within this area, there was a marked decline in the extent of severe defoliation. The infestation is now confined to the eastern two-thirds of the Fort Frances District and the adjacent south-west corner of the Port Arthur District. The infestation of spruce budworm which had persisted in the southern part of the Geraldton District for 10 years virtually disappeared in 1962. Only small pockets of light infestation remain.

In addition, three widely scattered small pockets of medium-intensity spruce budworm infestation occurred in the Lake Simcoe and Tweed Districts of southern Ontario.

Most public interest was centered on the developing outbreak of the forest tent caterpillar, although this insect in Ontario is not serious from the economic standpoint. The caterpillar occurs in cyclic epidemics an average of every 10 to 12 years, and the current outbreak in Ontario is the eastern end of the over-all epidemic which extends across the forested areas of the Prairies to the Rocky Mountains. In 1962 the largest continuous block of infestation, affecting aspen stands primarily, occurred in the Kenora and Sioux Lookout Districts over an area in excess of 15,000 square miles. Several scattered small patches of infestation occurred throughout northwestern Ontario, and in the Sudbury, North Bay, Pembroke and Parry Sound Districts in eastern Ontario.

Larch sawfly populations across northern Ontario as a whole declined still further in 1962 to the point of causing insignificant damage to tamarack trees. Scattered small pockets of medium to heavy infestation persisted in the Geraldton, Kapuskasing, Cochrane, Swastika, Sault Ste. Marie and Sudbury Districts. Moderate to heavy infestations in several tamarack stands and European larch plantations were reported from all of the most southerly row of districts across southern Ontario, but were particularly noticeable in the Lake Simcoe, Lindsay and Tweed Districts.

The European pine sawfly in Scots and red pine plantations continued to extend its range eastward in southern Ontario by an average distance of about four miles. The most noteworthy eastern advance was along the north shore of Lake Ontario, and in this vicinity has now reached Newcastle. The whole eastern boundary of the infestation now extends roughly from Penetanguishene southerly to Barrie and King City, and easterly to Orono and Newcastle. The insect is also well established at two spot infestations farther to the east near Vernonville and at Belleville.

The eastern tent caterpillar, which is conspicuous by the tent it makes on wild cherry and apple trees along roadsides, showed a further marked increase in numbers throughout central and southern Ontario. Infestations were most common in the Parry Sound, Pembroke, Lake Huron, Lake Simcoe, Lindsay and Tweed Districts, and in these areas the insect was found frequently on a variety of hardwood species.

Infestations of the jack-pine budworm in the Fort Frances District and in south-western Ontario subsided in 1962. However, high population levels persisted at several locations in the south-central part of the Kenora District. The largest block of infestation occurred in jack-pine stands over an area of about 400 square miles.

The birch skeletonizer again caused late summer browning to leaves of white birch trees from Sault Ste. Marie to North Bay and throughout much of southern Ontario. New areas of heavy infestation appeared in the southern part of the Swastika District, and south of Lake Nipigon in the Port Arthur and Geraldton Districts. Injury by this insect is spectacular in appearance but not serious to the tree.

The Dutch elm disease continued to increase in intensity throughout most of southern Ontario, and extended its known distribution northward to North Bay.

CONTROL

Most operations in the direct control of injurious insects are conducted from the ground with hand equipment in the pine, spruce and larch plantations of southern Ontario. In 1961, some aerial spraying was started with a Stearman aircraft to control the white-pine weevil in 30-year-old white pine plantations. In 1962, an additional 400 acres of white pine in the Kirkwood Management Unit were sprayed with DDT using a Bell G2 helicopter. In total, over 8,000 acres of white pine plantations and natural stands were treated by spraying and leader clipping to control the white-pine weevil.

Spraying for control of various species of sawflies such as the red-headed pine sawfly, the European pine sawfly, the yellow-headed spruce sawfly and the larch sawfly, covered a total of 2,700 acres. An additional 300 acres were treated chemically for control of the pine tip moth and certain weevils.

More than 1,300 acres of new plantations were treated with aldrin to control white grubs, and 400 acres of plantations were treated chemically for control of mice.

Direct control of tree diseases was confined to control of white-pine blister rust. The chemical 2, 4, 5-T is used to eradicate the alternate host plants, wild currants and gooseberries, from the immediate vicinity of the pines. Each year a portion of a long-term programme is completed, and in 1962 approximately 9,700 acres were protected against blister rust in important pine producing areas in the Sault Ste. Marie, North Bay, Pembroke, Lindsay, Tweed and Kemptville Districts.

Radio Communications

Due to the continued expansion of V.H.F. radiotelephone facilities throughout the province, which provide "person-to-person" unrecorded communications, traffic totals of recorded message were slightly down. A decline of 0.1 per cent in the message count and 4.7 per cent in message word content was encountered even though 86,282 messages were handled, totalling 2,163,824 words. Five new radio stations were added to the ground system; they were located at Marne Lake,

Panache Lake, Miller Lake, Fitzroy Park and Darlington Park.

Major purchases of new equipment consisted of 76 V.H.F. mobile radiotelephones, 50 ninety-channel V.H.F. transreceivers for use in the 118/128 Mc/s. band (replacing obsolete equipment in 44 aircraft), and 25 remote control V.H.F. transmitter and receiver frequency changing units.

Modifications to existing radio equipment to conform with, or exceed, Department of Transport Specifications, constituted a large part of the Maple Radio Laboratory's work programme. A new completely transistorized lookout tower multi-channel V.H.F. transreceiver was developed at the Sault Ste. Marie Radio Laboratory and 30 units constructed for installation in the Sudbury District for the 1963 fire season. Development is also under way at the latter laboratory of a combination H.F./V.H.F. portable completely transistorized transreceiver for use in non-departmental aircraft which may be hired for short periods in severe fire conditions.

Inventory of 1962 radio communications equipment was as below:

Tower Radiotelephones	407
Mobile Radiotelephones (H.F. & V.H.F.)	400
Marine Radiotelephones	15
Portable Radiotelephones ($\frac{1}{2}$ watt H.F.)	277
Portable Radiotelephones ($2\frac{1}{2}$ watt H.F.)	111
Portable V.H.F. Walkie Talkie Radiotelephones	109
Portable V.H.F. Radiotelephones (2 watt)	125
Fire Base Portable Radiotelephones (35 watt)	94
30 Watt Ground Radio Stations (H.F.)	105
75 Watt Ground Radio Stations (H.F.)	2
100 Watt Ground Radio Stations (H.F.)	3
150 Watt Ground Radio Stations (H.F.)	8
300 Watt Ground Radio Stations (H.F.)	2
500 Watt Ground Radio Stations (H.F.)	8
15/20 Watt Ground Radio Stations (V.H.F.)	80
50 Watt Ground Radio Stations (V.H.F.)	75
(including V.H.F. attachments for 30 watt Ground Stations above)	
Aircraft Radio Stations	44
Aircraft Ground Hailers	20
TOTAL	1,885

NUMBER OF FOREST FIRES AND AREA BURNED OVER BY DISTRICTS

District	1958		1959		1960		1961		1962	
	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres
Sioux Lookout	45	1,048	16	34	148	20,303	201	1,130,814	59	1,300
Kenora	146	945	43	55	103	1,657	250	34,155	50	260
Fort Frances	61	574	38	205	81	1,231	95	5,233	10	3
Port Arthur	116	12,253	59	472	77	450	92	8,887	46	106
Geraldton	35	255	39	134	73	5,772	55	308	31	529
Kapuskasing	23	4,538	37	76	17	474	12	42	30	1,566
Cochrane	22	463	37	124	16	485	18	777	26	1,230
Swastika	24	423	59	1,235	4	69	23	266	41	790
Chapleau	21	5,319	39	111	15	30	7	361	23	26
Gogama	28	42	40	757	11	9	13	2	44	224
Sault Ste. Marie	102	435	75	115	28	18	75	347	80	384
Sudbury	292	6,541	154	759	53	65	115	666	332	4,459
White River	27	298	16	261	30	19	41	50	22	78
North Bay	107	808	75	441	18	12	38	128	141	1,241
Parry Sound	208	817	94	156	80	70	77	158	258	349
Pembroke	96	623	57	82	54	62	38	66	128	460
Tweed	105	790	98	208	89	521	100	2,341	106	560
Kemptville	—	—	—	—	—	—	—	—	—	—
Lindsay	71	462	40	40	49	136	50	122	57	200
Lake Huron	15	12	2	—	1	—	3	3	10	14
Lake Simcoe	14	6	11	16	9	3	2	2	27	25
Totals	1,558	36,652	1,029	5,281	956	31,386	1,305	1,184,728	1,521	13,804

NUMBER OF FOREST FIRES AND AREA BURNED OVER BY MONTHS

Month	1958		1959		1960		1961		1962	
	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres
March	—	—	—	—	—	—	—	—	—	—
April	413	5,577	90	972	21	119	89	1,131	135	1,302
May	411	26,331	162	1,051	145	2,361	316	3,739	249	1,715
June	198	3,626	161	692	79	387	311	1,152,111	248	4,178
July	69	90	341	2,045	326	27,515	211	17,706	466	2,686
August	403	920	248	514	190	275	251	8,392	296	3,618
September	37	18	25	5	87	135	32	46	99	200
October	12	15	1	—	91	539	64	66	23	93
November	15	25	1	2	17	55	31	1,537	5	12
Totals	1,558	36,652	1,029	5,281	956	31,386	1,305	1,184,728	1,521	13,804

CLASSIFICATION OF FOREST FIRES BY SIZE

Size	1958 No.	1959 No.	1960 No.	1961 No.	1962 No.
¼ acre and under -----	490	470	416	502	670
Over ¼ to 10 acres -----	861	493	448	639	744
Over 10 to 100 acres -----	178	56	59	112	84
Over 100 to 500 acres -----	20	9	23	12	17
Over 500 acres -----	9	1	10	40	6
Totals -----	1,558	1,029	956	1,305	1,521

FOREST FIRE SUMMARY

Year	Crown Acres	Private Acres	Total Acres	Total No. of Fires	Average Fire Size (Acres)
1925	132,481	57,062	189,543	1,149	165
1926	65,888	22,486	88,374	1,110	80
1927	22,772	12,970	35,742	924	39
1928	96,436	3,947	100,383	536	187
1929	608,750	16,893	625,643	1,550	404
1930	357,531	354,278	711,809	1,402	508
1931	105,866	32,421	138,287	1,851	75
1932	626,555	52,466	679,021	2,073	328
1933	325,034	24,924	349,958	1,919	182
1934	160,348	38,285	198,633	1,568	127
1935	183,179	67,483	250,662	1,309	191
1936	1,153,876	110,557	1,264,433	2,264	558
1937	201,887	22,859	224,746	1,453	155
1938	96,168	42,077	138,245	1,292	107
1939	26,089	3,009	29,098	961	30
1940	100,990	20,624	121,614	1,014	120
1941	271,793	394,754	666,547	1,265	527
1942	77,709	36,007	113,716	1,224	93
1943	33,465	19,352	52,817	624	85
1944	73,228	95,663	168,891	1,137	149
1945	17,997	30,513	48,510	966	50
1946	44,656	32,113	76,769	1,739	44
1947	38,093	45,939	84,032	1,393	60
1948	854,778	162,611	1,017,389	2,036	500
1949	40,593	19,472	60,065	1,834	33
1950	13,203	23,577	36,780	985	37
1951	96,662	4,581	101,243	904	112
1952	7,264	5,157	12,421	1,095	11
1953	44,519	14,290	58,809	1,520	39
1954	36,115	18,578	54,693	881	62
1955	370,948	25,475	396,423	2,252	176
1956	221,822	4,390	226,212	1,017	222
1957	24,250	22,401	46,651	1,671	28
1958	25,544	11,108	36,652	1,558	24
1959	2,580	2,701	5,281	1,029	5
1960	29,190	2,196	31,386	956	33
1961	1,180,900	3,828	1,184,728	1,305	908
1962	7,583	6,221	13,804	1,521	9

GENERAL CAUSES OF FOREST FIRES

(Number of Fires, 1962)

	Fires	Acres
Lightning -----	295	1,991
Industrial -----	75	2,636
Recreation -----	592	5,249
Resident -----	146	1,058
Railways -----	76	532
Incendiary -----	38	59
Miscellaneous -----	289	2,201
Unknown -----	10	83
	1,521	13,804

CAUSES OF FOREST FIRES

(Number of Fires, 1962)

By Source of Ignition	Fires	By Responsible Group	Fires
Smoking Material	517	Fisherman	227
Hot Box	1	Hunter	22
Brake Shoe	8	Canoeist	8
Steam Locomotive	—	Picknicker	46
Diesel Locomotive	17	Berry Picker	132
Fusee	—	Camper	57
Tie Burning	8	Private Cottager	73
Power Saw	7	Commercial Resort Operator	6
Sparks from Chimney	5	Guided Party	2
Mechanical Equipment	17	Children	139
Spark from Burner	6	Youth Group	7
Sawdust Pile Burning	2	Car Passenger	86
Right-of-Way Burning	22	Train Passenger	7
Playing with Matches	112	Indian (on Indian Reserve only)	2
Garbage Dump Burn	28	Timber Cruiser	—
Rubbish Burning	36	Woods Industry Employee	22
Brush Burn	41	Land Survey Party	1
Grass Burn	37	Trapper	11
Burning Bulldozed Piles	6	Prospector	2
Camp Fire	233	Mining Employee	6
Power Line (Short Circuit)	22	Pipeline Employee	—
Structural Fire	16	Hydro Employee	27
Explosives	—	Highway or Road Employee	10
Fireworks	8	Municipal Employee	2
Miscellaneous (Known)	19	Telephone Company Employee	2
Unknown	58	R.R. Train Crew	39
Lightning	295	R.R. Section Crew	17
	1,521	R.R. Work Crew	8
		Other Industrial Employee	17
		Farmer	38
		Resident Rural (Not Farmer)	61
		Resident Urban	11
		Military	—
		Unknown	138
		Hiker	—
		Lightning	295
			1,521

STATEMENT OF FIRE

Districts	CROWN		\$	PRIVATE	
	Timber Cu. Ft.	Damage \$	Damage to Reproduction	Timber Cu. Ft.	Damage \$
Sioux Lookout -----	1,230,352	24,607.04	432.28	1,650	33.00
Kenora -----	6,278	125.56			
Fort Frances -----	400	8.00			
Port Arthur -----	390	7.80	12.80		
Geraldton -----	26,690	533.80	4,983.00		
Kapuskasing -----	777,920	15,558.40	162.00	19,651	393.02
Cochrane -----	43,825	876.50	533.20		
Swastika -----	46,997	939.94	297.90	15,960	319.20
Chapleau -----	1,360	27.20	28.50		
Gogama -----	83,574	1,671.48	708.75		
Sault Ste. Marie ---	4,647	92.94	15.00	131	2.62
Sudbury -----	56,857	1,137.14	262.15	12,203	244.06
White River -----	20,040	400.80	622.72	425	8.50
North Bay -----	99,192	1,983.84	1,215.54	16,410	328.20
Parry Sound -----	9,264	185.28	173.90	6,491	129.82
Pembroke -----	16,739	334.78	574.65		
Tweed -----	11,167	223.34	675.14	4,663	93.26
Lindsay -----	3,480	69.60	42.30	655	13.10
Lake Simcoe -----	510	10.20		881	17.62
Lake Huron -----				4,321	86.42
Totals -----	2,439,682	48,793.64	10,739.83	83,441	1,668.82

DAMAGE TABLE, 1962

\$		TOTAL		\$	\$	\$
Damage to Reproduction	Timber Cu. Ft.	Damage \$	Total Damage Reproduction	Total Damage	Private Property Damage	
	1,232,002	24,640.04	432.28	25,072.32		
38.74	6,278	125.56	38.74	164.30	335.00	
	400	8.00		8.00		
3.40	390	7.80	16.20	24.00	15,275.00	
	26,690	533.80	4,983.00	5,516.80		
22.60	797,571	15,951.42	184.60	16,136.02	2,380.00	
	43,825	876.50	533.20	1,409.70	39,564.90	
21.80	62,957	1,259.14	319.70	1,578.84	5,760.00	
	1,360	27.20	28.50	55.70		
	83,574	1,671.48	708.75	2,380.23		
26.25	4,778	95.56	41.25	136.81	136.80	
10,425.10	69,060	1,381.20	10,687.25	12,068.45		
	20,465	409.30	622.72	1,032.02	3,768.00	
1,465.33	115,602	2,312.04	2,680.87	4,992.91	5,590.00	
143.05	15,755	315.10	316.95	632.05	23,350.00	
503.80	16,739	334.78	1,078.45	1,413.23	3,000.00	
797.93	15,830	316.60	1,473.07	1,789.67	5.00	
92.65	4,135	82.70	134.95	217.65		
5.00	1,391	27.82	5.00	32.82		
	4,321	86.42		86.42		
13,545.65	2,523,123	50,462.46	24,285.48	74,747.94	99,164.70	

MEANS OF FIRE DETECTION

	Towers	Rangers	Public	Aircraft	Total Fires
1962 Totals	555	92	743	131	1,521
1961 "	419	74	566	246	1,305
1960 "	304	63	431	158	956
1959 "	414	66	458	91	1,029
1958 "	581	87	769	121	1,558

NUMBER OF FIRE PERMITS ISSUED

1962	1961	1960	1959	1958
22,298	20,956	18,616	17,889	15,842

NUMBER OF TRAVEL PERMITS ISSUED

	1962	1961	1960	1959	1958
Permits -----	108,771	108,108	94,634	112,916	121,373
Persons -----	366,985	393,510	332,471	390,510	412,468

NUMBER OF WORK PERMITS ISSUED, 1962

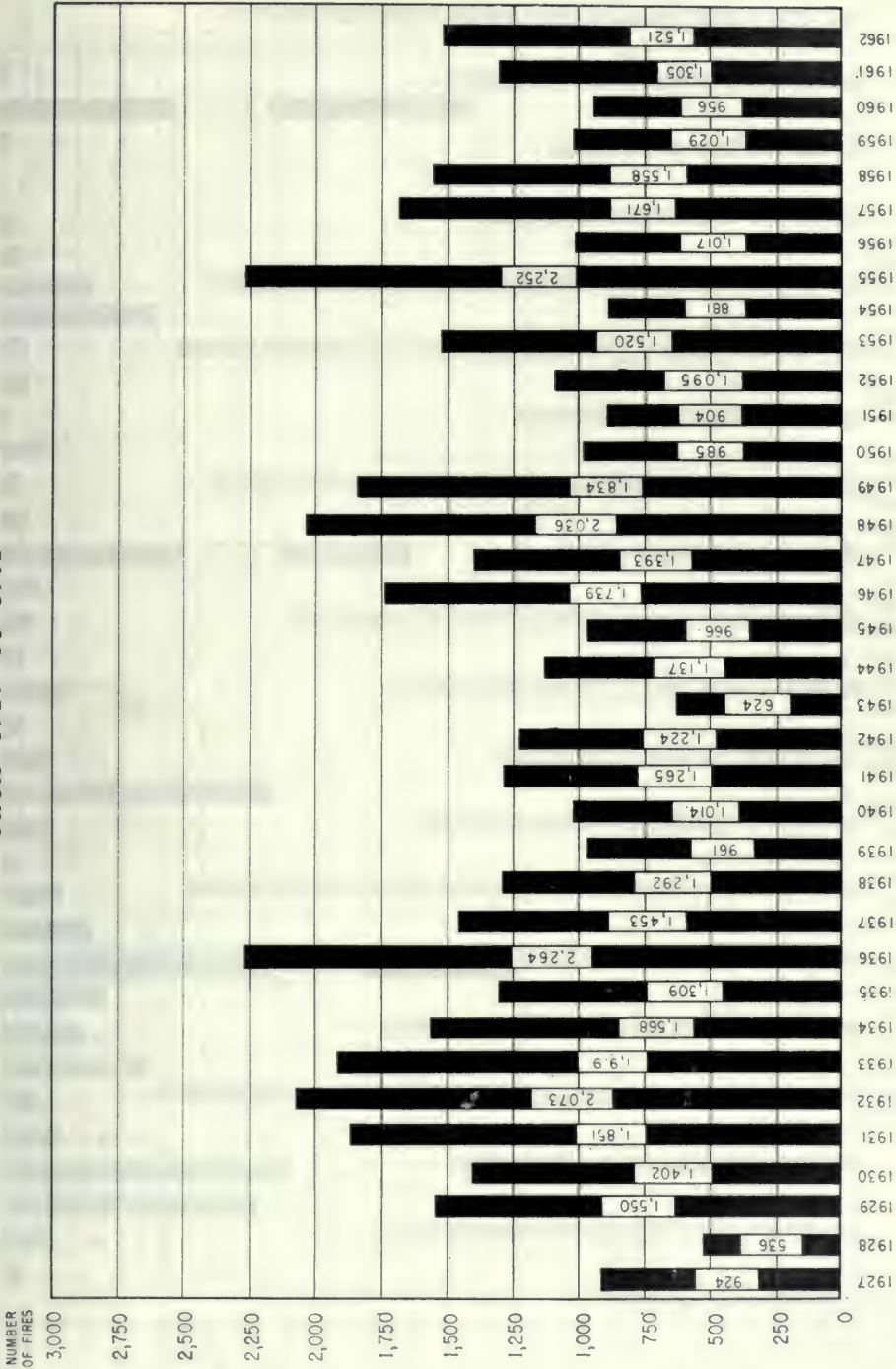
Districts	Mining Operations		Woods Operations		Miscellaneous Operations		Totals	
	No. of Permits	Men Engaged	No. of Permits	Men Engaged	No. of Permits	Men Engaged	No. of Permits	Men Engaged
Sioux Lookout	56	234	36	266	39	534	131	1,034
Kenora	9	36	304	2,398	30	228	343	2,662
Fort Frances	12	67	341	1,656	32	110	385	1,833
Port Arthur	18	62	444	2,471	59	461	521	2,994
Geraldton	46	233	77	3,281	67	333	190	3,847
Kapuskasing	7	47	102	4,153	108	1,273	217	5,473
Cochrane	56	205	249	3,502	75	1,738	380	5,445
Swastika	135	359	206	1,737	41	411	382	2,507
Chapleau	11	42	73	1,642	10	107	94	1,791
Gogama	19	97	28	434	9	247	56	778
Sault Ste. Marie	23	214	192	1,764	15	98	230	2,076
Sudbury	41	281	52	331	80	680	173	1,292
White River	30	166	40	1,180	59	416	129	1,762
North Bay	27	103	336	2,608	49	282	412	2,993
Parry Sound	3	17	146	712	68	351	217	1,080
Pembroke	—	—	134	1,018	42	382	176	1,400
Tweed	14	45	267	763	109	1,195	390	2,003
Lindsay	4	115	50	484	59	590	113	1,189
Lake Simcoe	—	—	3	9	22	140	25	149
Lake Huron	—	—	21	46	5	21	26	67
Totals	511	2,323	3,101	30,455	978	9,597	4,590	42,375

REPORT OF MAJOR EQUIPMENT (As of March 31st, 1963)

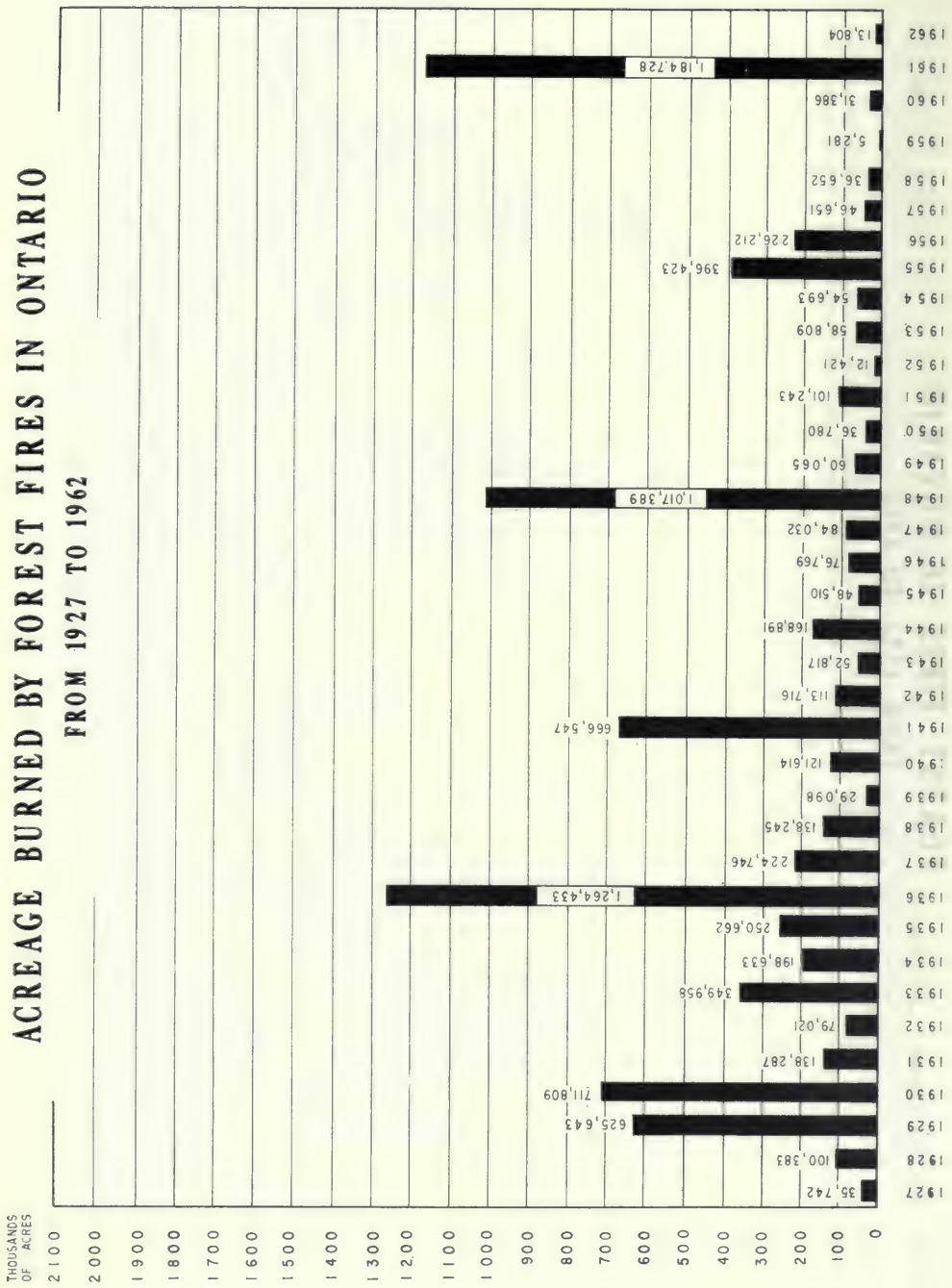
LOCATION	Portable Pumps		Fire Hose	Blankets	Tents	Sleeping Bags	Binoculars	Canoes	Boats		Out-board Motors	Motor Vehicles	Trailers	Tractors	Rly.		*					
	Power	Hand							Not	In-board					Motor Cars	V		S	B			
DISTRICTS																						
Aylmer	11	144	305	30	nil	6	31	3	20	6	17	48	20	13	nil	nil	nil	nil				
Chapleau	47	227	1,309	2,991	95	72	22	40	11	11	26	28	8	6	nil	nil	nil	nil				
Cochrane	52	570	1,888	1,539	114	86	41	47	15	3	42	34	11	6	7	nil	nil	nil				
Fort Frances	40	226	1,133	1,026	95	89	23	27	28	1	37	22	7	5	nil	nil	nil	nil				
Geraldton	75	480	2,183	2,189	207	78	28	52	13	2	42	41	7	8	4	3	nil	nil				
Gogama	34	270	1,202	1,670	67	31	20	36	10	2	22	20	6	5	6	nil	3	nil				
Hespeler	16	169	1,353	18	4	10	23	1	18	14	14	41	24	13	nil	nil	nil	nil				
Kapuskasing	44	351	1,337	1,668	107	45	32	52	9	nil	39	37	11	7	8	7	nil	nil				
Kemptville	14	107	1,362	25	5	9	13	1	27	1	18	25	12	15	nil	nil	nil	nil				
Kenora	65	311	1,834	1,274	119	49	28	37	29	6	35	44	7	8	nil	nil	nil	1				
Lindsay	43	399	1,153	1,656	43	59	31	29	38	nil	41	52	22	20	nil	nil	1	1				
Maple	30	235	1,569	294	12	11	41	6	26	1	33	59	22	28	6	nil	1	1				
North Bay	50	325	1,090	1,253	134	112	36	71	38	1	44	44	7	6	nil	1	3	nil				
Parry Sound	43	377	1,341	1,533	61	87	33	36	46	2	43	46	18	4	nil	1	3	nil				
Pembroke	39	284	1,182	2,028	119	103	20	65	34	1	50	52	13	9	nil	4	nil	1				
Port Arthur	50	379	1,901	2,151	154	89	30	39	21	nil	32	44	10	9	nil	1	3	nil				
Sault Ste. Marie	69	506	2,209	3,297	182	78	29	48	21	1	31	62	12	12	2	nil	nil	nil				
Sioux Lookout	74	496	2,552	2,805	228	98	25	68	18	3	66	31	7	3	3	3	3	2				
Sudbury	62	333	1,400	2,207	152	56	38	53	27	8	46	47	12	7	1	nil	nil	nil				
Swastika	36	256	956	1,456	74	93	25	22	nil	83	32	20	8	4	1	nil	nil	nil				
Tweed	40	262	880	1,507	43	61	41	13	50	1	47	49	20	4	1	nil	nil	nil				
White River	49	359	1,444	983	132	60	25	63	14	nil	32	25	9	3	2	2	nil	nil				
REGIONS																						
Central	62	307	1,149	1,445	93	7	nil	1	1	nil	2	1	nil	nil	nil	nil	nil	nil				
South-Central	nil	nil	195	661	nil	1	nil	nil	nil	nil	nil	nil	nil	1	nil	nil	nil	nil				
Western	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil				
Mid-Western	40	276	1,081	363	72	18	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil				
South-Eastern	nil	nil	nil	nil	nil	18	nil	nil	nil	nil	nil	1	nil	nil	nil	nil	nil	nil				
Northern	33	476	1,114	1,140	61	1	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil				
South-Western	nil	nil	26	nil	nil	nil	nil	nil	nil	nil	nil	5	1	3	nil	nil	nil	nil				
OTHERS																						
Ranger School	11	34	139	751	6	1	4	22	5	nil	5	4	1	2	nil	nil	nil	nil				
Air Service	nil	nil	nil	17	nil	118	nil	1	1	1	5	1	nil	2	nil	nil	nil	nil				
Head Office																						
(incl. Research & Cons. Authorities) ..	16	nil	7	98	173	300	51	31	28	0	45	75	15	7	nil	nil	1	nil				
TOTAL	1,145	8,159	32,296	36,075	2,542	1,828	691	868	570	40	887	967	302	214	38	16	22	5				

*V—Veloipedes *S—Snow Vehicles *B—Barges

FOREST FIRES IN ONTARIO FROM 1927 TO 1962

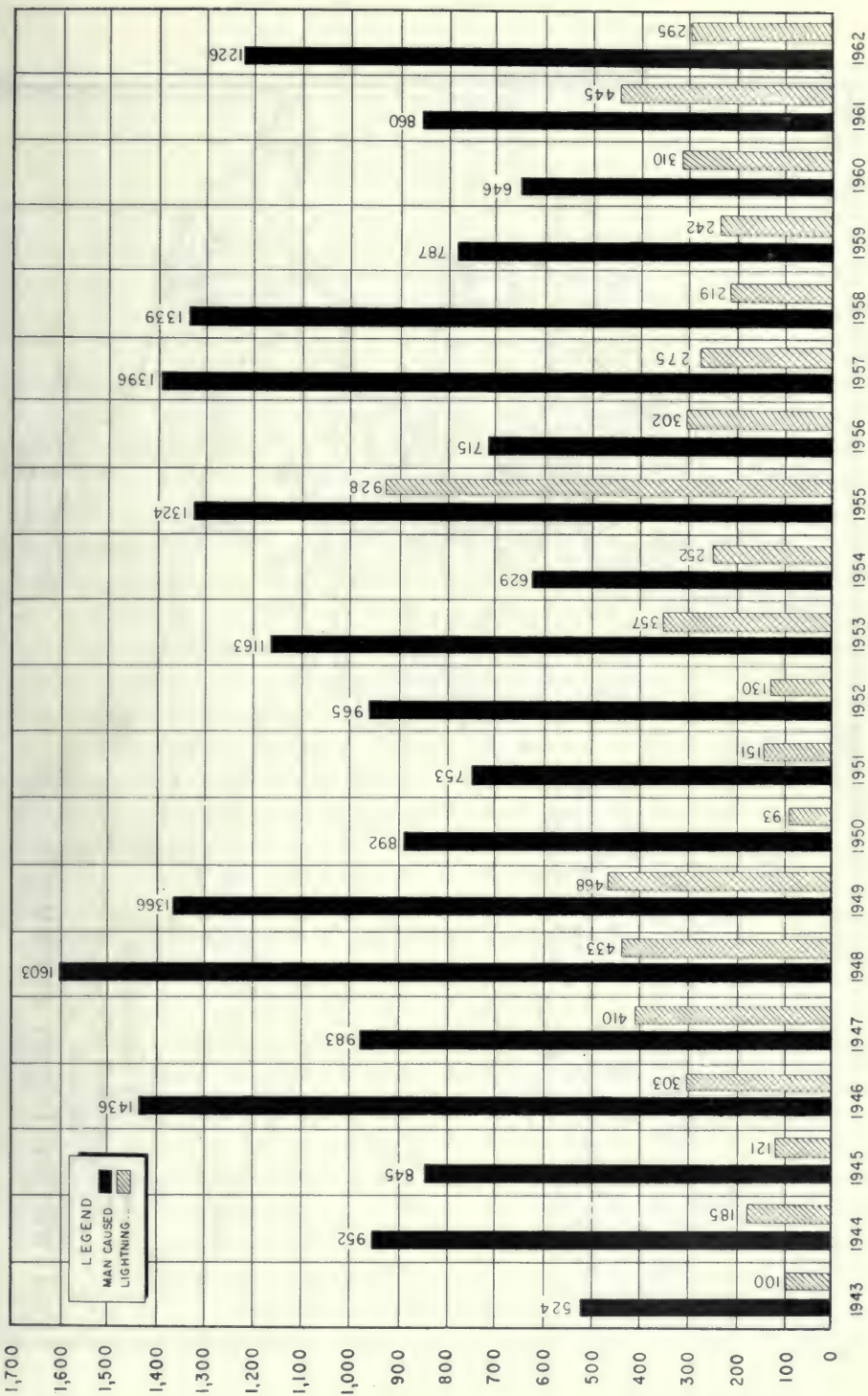


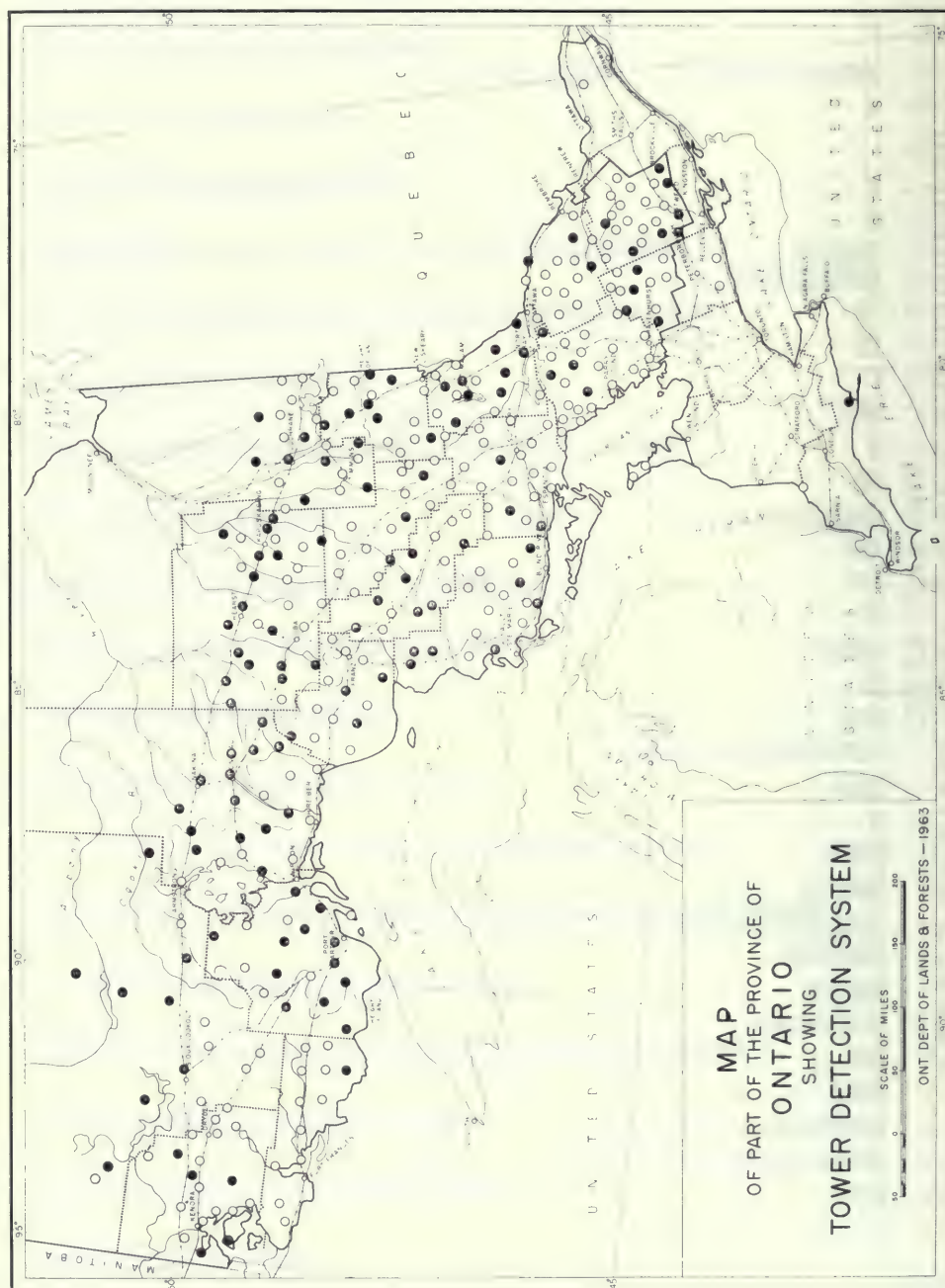
ACREAGE BURNED BY FOREST FIRES IN ONTARIO FROM 1927 TO 1962



NUMBER OF FIRES - MAN CAUSED AND LIGHTNING YEARS 1943 - 1962

NUMBER
OF FIRES





AIR SERVICE SECTION

1962-63

Delivery of two float-equipped Otter aircraft was taken in October replacing two Beaver aircraft which were sold by public tender. The addition of the two Otter aircraft provides a better balanced fleet which now consists of 33 Beaver, 10 Otter and one Super Widgeon, making a total of 44.

Water dropping from tanks carried on Otter and Beaver aircraft continues to play an important part in fire control operations. Improvements were made in water-dropping equipment by the development and installation of a better release mechanism and other modifications such as more efficient filler tubes.

Five helicopters were again leased from May 1st to September 30th to supplement fixed wing aircraft in fire control operations.

Total flying time for the year was 12,541 hours. Total passengers carried, 32,569. Total loads carried 11,314,320 pounds.

Flying operations were carried out from 28 bases during the fire season with 11 of these bases providing year-round service.

Sixteen mercy flights were carried out during the year.

The following tables provide further details on air operations.

Table I

OPERATING BASES, 1962-63

Base	Type of Aircraft
Sioux Lookout	Beaver
Ignace	Otter
Red Lake	Beaver
Pickle Lake	Beaver
Caribou Lake	Otter
*Kenora	Beaver
Fort Frances	Beaver (2)
Nym Lake	Beaver
*Port Arthur	Beaver
	Otter
*Geraldton	Otter
Pays Plat	Beaver
Twin Lakes (Nakina)	Beaver
Remi Lake	Beaver
Carey Lake	Beaver
South Porcupine	Beaver
Kenogami	Beaver
*Chapleau	Beaver
*Gogama	Beaver
*Sault Ste. Marie	Beaver
	Otter
Lauzon Lake	Beaver
*Sudbury	Beaver
	Otter
White River	Beaver
Oba Lake	Beaver
Temagami	Beaver
Parry Sound	Beaver
*Pembroke	Otter
Tweed	Beaver
*Toronto	Beaver (2)
	Widgeon

* Denotes Year-round Bases

Table II

TRANSPORT AIRCRAFT

Transport Aircraft — Effective Loads Carried, 1962-63

Aircraft	Hours Flown		Effective Loads Carried	
Beaver				
CF-OBS	353:50	151,423 lbs.	75 tons,	1423 pounds
CF-OBW	259:30	250,382 lbs.	125 tons,	382 pounds
CF-OBX	210:05	193,956 lbs.	96 tons,	1956 pounds
CF-OBY	291:55	155,800 lbs.	77 tons,	1800 pounds
CF-OBZ	424:10	230,260 lbs.	115 tons,	260 pounds
CF-OCA	209:30	127,577 lbs.	63 tons,	1577 pounds
CF-OCB	297:35	225,405 lbs.	112 tons,	1405 pounds
CF-OCC	284:40	255,525 lbs.	127 tons,	1525 pounds
CF-OCD	337:10	286,070 lbs.	143 tons,	70 pounds
CF-OCE	350:10	371,358 lbs.	185 tons,	1358 pounds
CF-OCG	187:10	73,275 lbs.	36 tons,	1275 pounds
CF-OCH	140:35	77,239 lbs.	38 tons,	1239 pounds
CF-OCJ	401:50	292,479 lbs.	146 tons,	479 pounds
CF-OCK	247:50	120,777 lbs.	60 tons,	777 pounds
CF-OCL	154:10	95,025 lbs.	47 tons,	1025 pounds
CF-OCN	260:20	146,535 lbs.	73 tons,	535 pounds
CF-OCO	453:40	255,200 lbs.	127 tons,	1200 pounds
CF-OCF	367:35	245,195 lbs.	122 tons,	1195 pounds
CF-OCQ	239:30	119,145 lbs.	59 tons,	1145 pounds
CF-OCS	243:30	111,795 lbs.	55 tons,	1795 pounds
CF-OCT	321:05	120,987 lbs.	60 tons,	987 pounds
CF-OCU	316:50	226,267 lbs.	113 tons,	267 pounds
CF-OCV	396:00	204,675 lbs.	102 tons,	675 pounds
CF-OCX	325:35	152,443 lbs.	76 tons,	443 pounds
CF-OCY	338:40	511,129 lbs.	255 tons,	1129 pounds
CF-OCZ	252:50	148,140 lbs.	74 tons,	140 pounds
CF-ODA	350:45	138,675 lbs.	69 tons,	675 pounds
CF-ODB	234:10	208,215 lbs.	104 tons,	215 pounds
CF-ODC	372:50	96,380 lbs.	48 tons,	380 pounds
CF-ODD	160:40	90,570 lbs.	45 tons,	570 pounds
CF-ODE	328:00	66,470 lbs.	33 tons,	470 pounds
CF-ODF	1:35	165 lbs.		165 pounds
CF-ODG	387:10	179,253 lbs.	89 tons,	1253 pounds
CF-ODO	119:45	14,035 lbs.	7 tons,	35 pounds
CF-ODS	150:25	60,445 lbs.	30 tons,	445 pounds
Otter				
CF-ODJ	346:35	302,020 lbs.	151 tons,	20 pounds
CF-ODK	183:40	429,980 lbs.	214 tons,	1980 pounds
CF-ODL	311:45	537,405 lbs.	268 tons,	1405 pounds
CF-ODP	269:40	426,935 lbs.	213 tons,	935 pounds
CF-ODQ	191:50	431,488 lbs.	215 tons,	1488 pounds
CF-ODU	323:10	1,639,383 lbs.	819 tons,	1383 pounds
CF-ODV	480:25	367,485 lbs.	183 tons,	1485 pounds
CF-ODW	415:15	1,141,404 lbs.	570 tons,	1404 pounds
CF-ODX	3:00	720 lbs.		720 pounds
CF-ODY	2:50			
Widgeon				
CF-ODR	242:30	35,140 lbs.	17 tons,	1140 pounds

Total Transport Section:—

Total Flying Time, Hours:	12,541:45
Total Loading, lbs.:	11,314,230 lbs.
Total Loading, tons:	5,657 tons, 230 lbs.

Table III

HOURS FLOWN ON VARIOUS PHASES OF FLYING OPERATIONS

	1949-62	1962-63	Total
Fire Ranging (Detection and Suppression)	76,075:40	4,168:30	80,244:10
Timber Management -----	11,294:55	923:20	12,218:15
Fish and Wildlife -----	33,800:10	3,862:10	37,662:20
Lands -----	2,804:10	229:55	3,034:05
Parks -----	1,449:20	385:30	1,834:50
Interdepartmental Flying -----	4,725:00	453:55	5,178:55
Administration -----	38,380:10	2,518:25	40,898:35
	168,529:25	12,541:45	181,071:10

BREAK-DOWN OF ADMINISTRATION

	1962-63
Mercy Flights -----	20:20
Tests (Radio and Aircraft) -----	108:25
Ferrying and Instructions -----	271:30
Research, Incl. Entomology -----	201:10
Forced Landings and Operations -----	212:05
Transportation Ordinary -----	1,077:20
Transportation Special -----	627:35
Photography -----	—
Surveys -----	—
	2,518:25

Table IV

PASSENGERS AND PERSONNEL CARRIED

	1924-62	1962-63	TOTAL
Passengers Carried -----	560,941	27,750	588,691
Personnel Carried -----	161,078	4,819	165,897
Total Passengers and Personnel Carried -----	722,019	32,569	754,588
Effective Loads Flown, lbs. -	167,141,390	11,314,230	178,455,620
Effective Loads Flown, tons --	83,570 tons 1,390 lbs.	5,657 tons 230 lbs.	89,227 tons 1,620 lbs.

Table V

HOURS FLOWN AT BASES, 1962-63

Base	Hours Flown
Algonquin Park -----	262:20
Carey Lake -----	269:45
Caribou Lake -----	318:45
Chapleau -----	410:20
Fort Frances -----	561:40
Geraldton -----	254:10
Gogama -----	525:25
Ignace -----	118:40
Kenogami -----	308:00
Kenora -----	571:50
Lauzon Lake -----	255:25
Nym Lake -----	278:20
Oba Lake -----	237:10
Pays Plat -----	213:20
Parry Sound -----	277:30
Pickle Lake -----	274:45
Port Arthur -----	556:50
Pembroke -----	639:25
Red Lake -----	218:55
Remi Lake -----	335:25
Sault Ste. Marie -----	770:30
Sioux Lookout -----	935:30
South Porcupine -----	239:30
Sudbury -----	746:00
Temagami -----	370:55
Twin Lakes (Nakina) -----	156:25
Toronto -----	419:35
White River -----	142:05
Tweed -----	268:05
Air Service General, Operations, Testing, Ferrying, etc.	1,605:10
	12,541:45

Table VI

FLYING TIME — PILOTS

Pilots		1924-62	1962-63	Total
Allen	DW	2,764:25	471:55	3,236:20
Ballantyne	DE	1,921:55	340:05	2,262:00
Beaushene	GD	3,446:55	495:30	3,942:25
Bieck	AH	1,595:10	322:50	1,918:00
Burt	AE	8,207:25	389:35	8,597:00
Calver	DR	3,257:25	260:50	3,518:15
Campbell	GE	4,787:35	569:35	5,357:10
Colfer	AP	6,696:50	590:40	7,287:30
Cooke	TC	7,082:30	705:10	7,787:40
Cram	WW	1,229:40	259:30	1,489:10
Croft	BR	1,500:40	266:30	1,767:10
Croal	DM	1,634:10	535:45	2,169:55
Culliton	JE		260:50	260:50
Denley	JG	7,566:55	256:40	7,823:35
Evans	FB	4,458:55	261:10	4,720:05
Fiskar	UW	3,871:10	438:20	4,309:30
Glennie	NA	2,624:45	429:20	3,054:05
Hoar	HA	3,045:35	156:25	3,202:00
Hoeberg	PS	3,119:15	358:55	3,478:10
Hugill	WA	2,504:25	288:35	2,793:00
Kincaid	J	7,656:45	387:10	8,043:55
Kirk	CJ	4,802:35	267:55	5,070:30
Lamont	JA	3,679:40	375:35	4,055:15
LeFeuvre	CJ	9,037:50	435:40	9,473:30
Lowe	B	1,594:55	188:55	1,783:50
MacDougall	FA	5,191:05	106:10	5,297:15
North	DH	1,250:20	212:00	1,462:20
Parsons	R	7,549:40	204:50	7,754:30
Pike	SJ	287:00	286:50	573:50
Poulin	LD	7,981:50	130:30	8,112:20
Reid	DM	4,591:00	300:05	4,891:05
Siegel	J	5,262:15	242:25	5,504:40
Speight	HC	7,858:20	532:15	8,390:35
Taylor	JM	3,554:20	33:30	3,587:50
Thomas	E	3,548:45	342:00	3,890:45
Thompson	FJ	2,695:10	357:05	3,052:15
Trussler	GE	7,625:50	248:30	7,874:20
Turcotte	LG	1,302:50	232:10	1,535:00
Other Pilots		187,033:15		187,033:15
		343,819:05	12,541:45	356,360:50

Table VII

FLYING TIME — AIRCRAFT

AIRCRAFT	1924-62	1962-63	Total
Beaver			
CF-OBS	5,239:55	353:50	5,593:45
CF-OBW	3,527:20	259:30	3,786:50
CF-OBX	4,086:10	210:05	4,296:15
CF-OBY	3,733:10	291:55	4,025:05
CF-OBZ	4,319:45	424:10	4,743:55
CF-OCA	4,006:25	209:30	4,215:55
CF-OCB	4,753:35	297:35	5,051:10
CF-OCC	4,079:15	284:40	4,363:55
CF-OCD	3,690:10	337:10	4,027:20
CF-OCE	4,576:50	350:10	4,927:00
CF-OCG	3,628:00	187:10	3,815:10
CF-OCH	4,112:30	140:35	4,253:05
CF-OCJ	3,427:20	401:50	3,829:10
CF-OCK	4,006:25	247:50	4,254:15
CF-OCL	3,830:40	154:10	3,984:50
CF-OCN	4,406:50	260:20	4,667:10
CF-OCO	4,156:30	453:40	4,610:10
CF-OCP	4,738:50	367:35	5,106:25
CF-OCQ	4,637:55	239:30	4,877:25
CF-OCS	4,124:00	243:30	4,367:30
CF-OCT	4,283:40	321:05	4,604:45
CF-OCU	4,009:40	316:50	4,326:30
CF-OCV	3,391:35	396:00	3,787:35
CF-OCX	3,601:55	325:35	3,927:30
CF-OCY	3,413:50	338:40	3,752:30
CF-OCZ	2,675:20	252:50	2,928:10
CF-ODA	3,317:00	350:45	3,667:45
CF-ODB	3,839:40	234:10	4,073:50
CF-ODC	4,724:55	372:50	5,097:45
CF-ODD	1,046:50	160:40	1,207:30
CF-ODE	2,975:35	328:00	3,303:35
CF-ODF	3,375:20	1:35	3,376:55
CF-ODG	3,804:45	387:10	4,191:55
CF-ODO	728:50	119:45	848:35
CF-ODS	556:15	150:25	706:40
Otter			
CF-ODJ	2,602:20	346:35	2,948:55
CF-ODK	2,407:30	183:40	2,591:10
CF-ODL	2,490:50	311:45	2,802:35
CF-ODP	1,566:25	269:40	1,836:05
CF-ODQ	1,902:25	191:50	2,094:15
CF-ODU	518:45	323:10	841:55
CF-ODV	610:30	480:25	1,090:55
CF-ODW	157:05	415:15	572:20
CF-ODX		3:00	3:00
CF-ODY		2:50	2:50
Widgeon			
CF-ODR	1,341:10	242:30	1,583:40
All Other Aircraft	200,454:15		200,454:15
	342,878:00	12,541:45	355,419:45

Table VIII

MERCY AND EMERGENCY FLIGHTS, 1962-63

Date	Aircraft	Pilot	Journey	Time	Reason
Apr. 6/62	OCY	G. E. Campbell	Gogama to South Porcupine to Gogama	1:10	Man seriously injured flown to Hospital at South Porcupine.
June 19/62	OCZ	W. W. Cram	Oba Lake to Franz to Wawa	:30	Woman seriously ill flown to Hospital at Wawa.
July 11/62	OCB	D. M. Reid	Prairie Portage to Agnes Lake to Prairie Portage	:20	Woman suffering from head injuries after a fall flown to Hospital.
July 12/62	OCY	G. E. Campbell	Mattagami to South Porcupine to Mattagami	1:05	Man and his son flown to Hospital to receive treatment for food poisoning.
July 18/62	OCB	D. M. Reid	Nym Lake to Crooked Pine Lake to Baril Lake to Nym Lake	:55	Young boy suffering from cut foot taken to Doctor at Camp Owakonze.
July 23/62	OCV	G. E. Campbell	Gogama to South Porcupine to Gogama	1:10	Woman seriously ill flown to Hospital at South Porcupine.
July 24/62	OBY	D. R. Galver	Tweed to Plevna to Tweed	:40	Victim of diving accident seriously injured and required medical attention.
Aug. 11/62	ODO	C. J. LeFevre	Cache Lake to Toronto	1:20	Appendicitis case flown to Toronto Hospital.
Aug. 26/62	OCB	D. M. Reid	McIntyre Lake to Camp 16	:15	Took Boy Scout to Camp 16 suspected of having polio.
Aug. 30/62	OBY	G. E. Campbell	Gogama to South Porcupine to Gogama	1:10	Young boy seriously ill flown to Hospital at South Porcupine.
Sept. 21/62	OCD	E. Thomas	Kenogami to Toronto to Kenogami	5:30	Car accident victim flown to Toronto Hospital.
Oct. 7/62	OCH	N. A. Glennie	Shining Tree to South Porcupine to Shining Tree	1:20	Woman seriously ill flown to Hospital at South Porcupine.
Oct. 24/62	OCV	G. E. Campbell	Gogama to South Porcupine to Gogama	1:10	Young girl suffering from foot injury flown to South Porcupine Hospital.
Jan. 28/63	OCV	G. E. Campbell	Gogama to South Porcupine to Gogama	1:10	Woman seriously ill flown to Hospital at South Porcupine.
Mar. 19/63	OCV	G. E. Campbell	Gogama to South Porcupine to Opeepsaway to South Porcupine	1:20	Doctor flown to Opeepsaway to give medical assistance to injured man.
Mar. 31/63	OCV	G. E. Campbell	Gogama to South Porcupine to Gogama	1:15	Woman seriously ill flown to Hospital at South Porcupine.

Table IX

HELICOPTER FLYING HOURS

1962-63

HELICOPTER	HOURS FLOWN
CF-IZH -----	285:35
CF-ICG -----	456:00
CF-IFA -----	441:35
CF-HER -----	420:15
CF-FHM -----	385:50
CF-MMN -----	12:25
CF-MEK -----	48:45
	<u>2,050:25</u>

HOURS FLOWN ON VARIOUS PHASES OF FLYING OPERATIONS

SERVICE	HOURS FLOWN
Fire Ranging -----	1,306:45
Timber Management -----	194:25
Fish and Wildlife -----	180:10
Lands -----	19:45
Parks -----	30:35
Administration -----	318:45
	<u>2,050:25</u>

BREAK-DOWN OF ADMINISTRATION

Research incl. Entomology -----	15:55
Transportation Ordinary -----	71:05
Transportation Special -----	12:05
Ferrying -----	219:40
	<u>318:45</u>



Crowds gather by land and water to bid on summer cottage lots in an auction sale of Crown land in Parry Sound Forest District.



Crown lands offer a great variety of scenic settings; above, a small island.

LANDS AND SURVEYS BRANCH

THE Branch is comprised of four sections with responsibilities and functions as follows:

SURVEYS SECTION

Performance of surveys for the disposition of Crown lands, the retracement of obliterated original boundaries, the restoration of original Crown survey points, base, meridian line and provincial park surveys, lands to be acquired for departmental purposes, provincial boundaries;

Custody and maintenance of survey records;

Map compilation and distribution; and

Sale of maps, survey record reproductions, departmental publications; Compilation and draughting of planimetric township, area, and miscellaneous plans, charts and graphs.

LANDS SECTION

Administration of the public lands;

Disposition of Crown lands by sale, lease, licence; and

Servicing of Crown leases and Licences of Occupation;

LAND USE PLANNING SECTION

Preparation of a land use plan for the public lands of the province;

Wilderness areas; and

Advisory Committees on Recreational Land Use Planning;

ENGINEERING SECTION

Inspection and approval of dams, investigations, water resource management, issuance and servicing of Water Power Lease Agreements, Licences of Occupation for dams, flooding, diversions;

Preparation of plans for departmental buildings;

General engineering services;

Designs and plans for hatcheries, trout rearing stations, renovations, plant and equipment;

Engineering studies for wildlife management; and

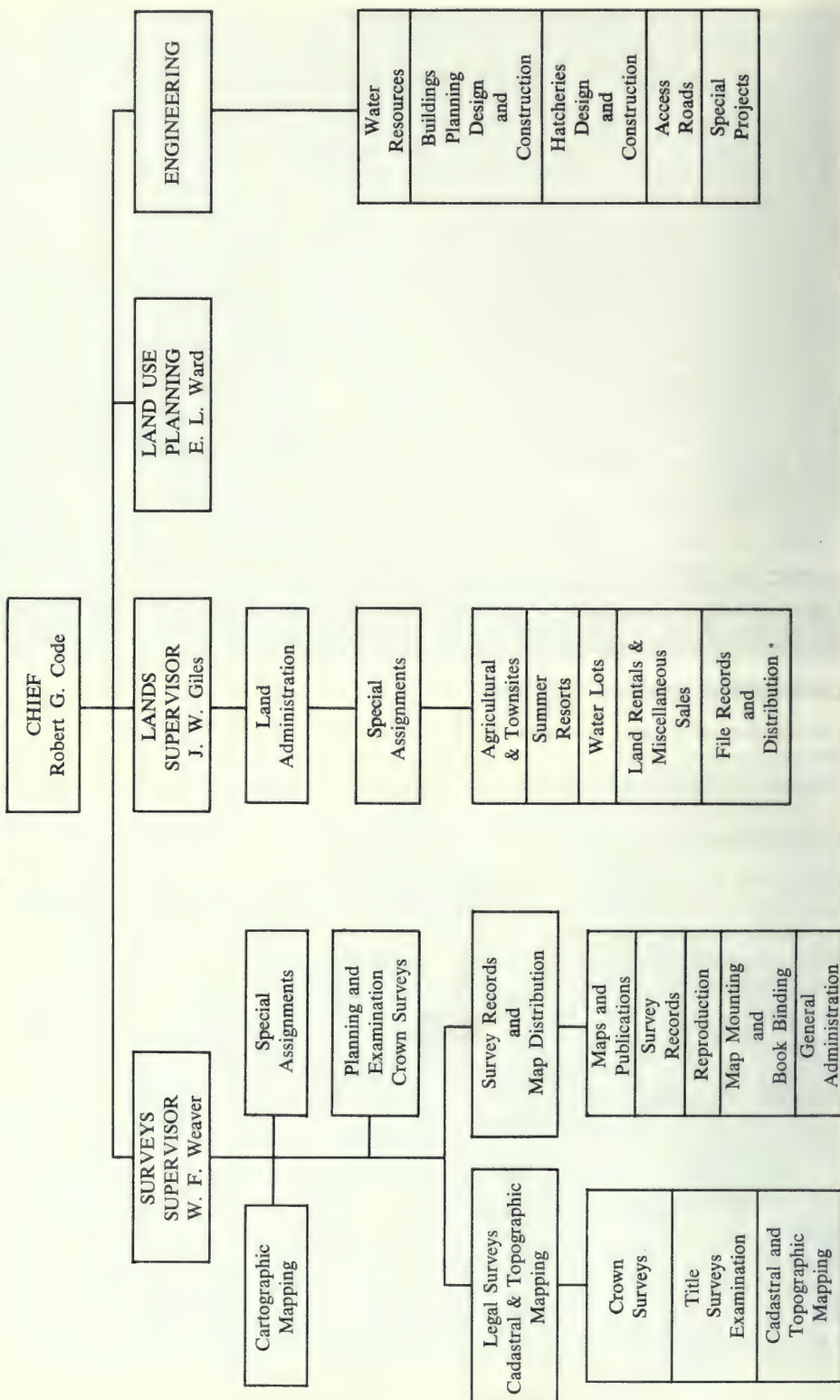
Access roads, acquisition of land.

SURVEYS SECTION

The subdivision survey programme was reduced during the past fiscal year with instructions issuing for 749 summer resort lots to be laid out on 71 subdivision survey plans as compared to 966 lots on the same number of plans the previous fiscal year. In addition to the subdivision surveys, 398 individual surveys were completed in areas where registered plans of subdivisions were not available. This was slightly over one-half of the number surveyed the previous fiscal year.

The long range programme of retracement surveys to restore obliterated survey lines and corners in the original Crown survey fabric was continued. In-

LANDS AND SURVEYS BRANCH



structions were issued for the retracement of approximately 230 miles of original survey lines and, in addition, 60 miles of original survey lines were retraced in connection with the surveys of Crown subdivisions. Supplementing this programme, special instructions were issued to 42 individual Ontario Land Surveyors in private practice for the restoration of original Crown survey points on an experimental basis. This is an attempt by the Department to restore and preserve with permanent survey monuments, the original township survey fabric, by the remonumenting of lot corners that are rapidly becoming obliterated.

A wide variety of building and service improvements and renovations were completed throughout the Province. A new tree seed extraction plant was constructed at Angus and a new sewage disposal plant was constructed at Maple.

A new map No. 24 of the Territorial Series, on a scale of 8 miles to 1 inch was published. This map comprising the territorial districts of Kenora and Rainy River, printed in 7 colours, has the improved colour tones, shows the boundaries of the Department of Lands and Forests administrative districts and a standardized grid system for locating geographical townships similar to the other maps of this series.

Legal Surveys

Survey instructions issued during the period April 1st, 1962, to March 31st, 1963:

MERIDIAN SURVEYS

No survey instructions were issued for the survey of Base or Meridian Lines during the fiscal year.

SPECIAL RETRACEMENT SURVEYS

1. Retracement survey of part of the boundary between the Townships of North and South Crosby and part of the west boundaries of the Townships of North and South Crosby, County of Leeds.
2. Retracement survey of the boundary between the Townships of Ogden and Bristol, District of Cochrane, to facilitate geological surveys by the Department of Mines.
3. Retracement survey of the boundary between lots 4 and 5, Concession 5, and survey of the line between the north and south halves of lot 4, Concession 5, Township of Aberdeen, District of Algoma, relative to a timber sale.
4. Retracement survey required in Lots 26, 27 and 28, Concessions 13 and 14, Township of Bonfield, District of Nipissing.
5. Retracement Surveys
 - a) Portions of the west and north boundaries and a portion of the road allowance between Concessions 1 and 2, Township of Olden, County of Frontenac.
 - b) Portion of the north boundary, Township of Denbigh, County of Lennox and Addington.
 - c) The boundary between the Townships of Wood and Muskoka for a distance of six miles, in the District of Muskoka.
 - d) The road allowance between Concessions 6 and 7 across lots 6 to 10 inclusive, Township of Cowper, District of Parry Sound.

- e) The south boundary across Lots 6 to 10 inclusive, Township of Burton, District of Parry Sound.
- f) The easterly and westerly boundaries, Township of Sheffield, County of Lennox and Addington.
- 6. Retracement survey to re-establish certain lot corners and lot boundaries in the Township of Field, District of Nipissing.
- 7. Retracement survey of portions of the north and west boundaries Township of McTavish, District of Thunder Bay.
- 8. Retracement survey of the north boundary, Township of Joly, District of Parry Sound.
- 9. Retracement Surveys
 - a) The road allowance between Concessions 12 and 13, across Lots 26 to 33 inclusive, Township of Stisted, District of Muskoka.
 - b) The west boundary, Township of McKellar, District of Parry Sound.
- 10. Retracement survey of the line between Concession A and Concession 1 S.R. across Lots 1-12 inclusive, Township of Watten, District of Rainy River.
- 11. Retracement survey of a portion of the north boundary, Township of Miscampbell, District of Rainy River.
- 12. Retracement and survey of the south and west boundaries, Township of Whitney, District of Cochrane.
- 13. Retracement survey of the south boundary, Township of Fournier, District of Cochrane.
- 14. Retracement survey of a portion of the west boundary, Township of Pembroke, County of Renfrew.
- 15. Retracement survey of the road allowance between Ranges A and B known as the Pembroke and Mattawan Road across Lots 8 to 19 inclusive, Township of Rolph, County of Renfrew.
- 16. Retracement survey of the northerly and easterly boundaries, Township of Strathy, District of Nipissing.
- 17. Retracement survey of the easterly boundary, Township of Harburn, County of Haliburton.
- 18. Retracement survey of the northerly boundary, Township of Harcourt, County of Haliburton.
- 19. Retracement survey of the easterly boundary, Township of Eyre, County of Haliburton.
- 20. Retracement survey of the southerly boundary, Township of Dill, District of Sudbury.
- 21. Retracement survey of the southerly three miles of the easterly boundary, Township of Eden, District of Sudbury.
- 22. Retracement survey of the westerly boundary, Township of Servos, District of Sudbury.
- 23. Retracement survey of a portion of the allowance for road between Concessions 6 and 7 E.B.R., Township of St. Edmunds, County of Bruce.
- 24. Retracement survey of certain road allowances within Lots 21 to 35, Concessions 10 to 15, Township of Bonfield, District of Nipissing.
- 25. Retracement survey of the allowance for road between the northern and southern divisions, Township of Burleigh, County of Peterborough.
- 26. Retracement survey of the northerly portion of the allowance for road between the Townships of Burleigh and Harvey, County of Peterborough.
- 27. Retracement survey of the boundary between the Townships of MacDonald and Meredith, District of Algoma.

28. Retracement survey of the boundary between the Townships of Laird and MacDonald, District of Algoma.
29. Retracement survey of the boundary between the Townships of Ogden and Price, District of Cochrane.

SUMMER RESORT SUBDIVISION SURVEYS

1. Grout Lake in Township 29, District of Sudbury.
2. Block of land in the unsurveyed territory at Key Harbour, District of Parry Sound.
3. Raspberry Island, Lake of the Woods, north of the Township of Morson, District of Kenora.
4. a) Jackfish Lake, Township 82.
b) O'Sullivan Lake, north of the Township of Rupert, District of Thunder Bay.
5. a) Big Stone Bay, Lake of the Woods, Township of Kirkup.
b) Rush Bay, Lake of the Woods, Township of Forgie.
c) Ziz-Zag Island, Clearwater Bay, south of the Township of Boys, District of Kenora.
6. a) Lake of the Two Mountains, Township of Forgie.
b) Royal Lake, Township of Ewart.
c) Long Pine Lake, Township of Gundy.
d) Island P.107, Clearwater Bay, Lake of the Woods, south of the Township of Pellatt.
e) Moth Lake, Township of Forgie.
f) Crowduck Lake, Township of Forgie, District of Kenora.
7. a) Eagle Lake, Township of Aubrey.
b) Canyon Lake, West of Smellie Township.
c) Edward Lake, Township of Smellie.
d) Eagle Lake, Township of Aubrey.
e) Little Gordon Lake, north of Tustin Township, District of Kenora.
8. a) Tasso Lake, Township of Finlayson.
b) Kahshe Lake, Township of Morrison.
c) Kawagama Lake, Township of McClintock, (2). Districts of Muskoka and Nipissing.
9. Wauquimakog Lake, Township of Wilson, District of Parry Sound.
10. a) Twelve Mile Bay of Georgian Bay, Township of Freeman.
b) Go-Home River (Go-Home Lake) Township of Gibson.
c) Go-Home River (Go-Home Lake) Township of Gibson.
d) Blackstone Harbour of Georgian Bay, Township of Conger, Districts of Muskoka and Parry Sound.
11. a) Loon Bay of Georgian Bay, Township of Carling.
b) Whitestone Lake, Township of Hagerman.
c) Deep Bay of Georgian Bay, Township of Carling, District of Parry Sound.
12. a) McLaren Island, Five Mile Bay, Township of Cowper.
b) Island B.470 in Georgian Bay, Township of Cowper.
c) Whitestone Lake, Township of Hagerman.
d) Healey Lake, Township of Conger, District of Parry Sound.
13. a) Nydia Lake, south of the Township of Weaver.
b) Sandpoint Lake, southwest of the Township of Bennett.
c) Redgut Bay of Rainy Lake, Township of Halkirk.
d) Perch Lake, south of the Township of Baker, District of Rainy River.

14. Key Inlet in unsurveyed territory lying west of the Township of Mowat District of Parry Sound.
15. a) Deer Bay of Lake Nipissing, Township of Haddo.
b) Maskinonge Island in the west arm of Lake Nipissing, Township of Casimir and Haddo, District of Sudbury.
16. Keefer Lake, Township of Hillary, District of Timiskaming.
17. Camp Lake, Township of Gour, District of Kenora.
18. Eels Lake, Township of Anstruther, County of Peterborough.
19. a) Lower Shebandowan Lake, Township of Conacher.
b) Middle Shebandowan Lake, Township of Hagey, District of Thunder Bay.
20. a) Wabatongushi Lake, Township of Glasgow.
b) Picnic Lake, Township of Hunt.
c) Rous Lake, Township 74.
Districts of Algoma and Thunder Bay.
21. a) Sheriff Lake, Township of Ingram.
b) Long Point Lake, Township of Chown.
c) Isabel Lake, Township of Corkill.
District of Timiskaming.
22. a) Green Lake, Township of Brougham.
b) Joe Lake, Township of Lavant.
Counties of Renfrew and Lanark.
23. Ashigami Lake, Townships of Scadding and Davis.
District of Sudbury. (2).

MUNICIPAL SURVEYS

1. Re-establishment and monumentation of certain corners in Lots 3, 4 and 5, Concessions 9 and 10, Township of Burleigh, County of Peterborough.
2. Re-establishment and monumentation of portions of the Concession road lines between Concessions 3 and 4, 4 and 5, and 6 and 7, Lots 11 and 18, Township of Alnwick, County of Northumberland.

MISCELLANEOUS SURVEYS

1. Establishment of the south boundary of a Mining Claim in Quirke Lake, Townships 144 and 150, District of Algoma. Cost of Survey to be borne by the Mining Company.
2. Survey certain lands and certain roads to be constructed in connection with park development in the Townships of Sunnidale and Flos, County of Simcoe.
3. Survey a commercial site in Lot 46, Concession 11, Township of Harrison, District of Parry Sound.
4. Survey two individual locations in Lot 19, Concession 1, Township of Humphry, District of Parry Sound.
5. Survey a commercial site on the Chapleau-Foley secondary highway No. 631, Township of Sandy, District of Algoma.
6. Survey a commercial site on Kindiogami Lake, Township 3B, District of Algoma.
7. Survey Lots 46-48, Concession 14, relative to squatters on Crown lands, Village of Britt, Township of Wallbridge, District of Parry Sound.
8. Survey part of Lots 4 and 5, Concession 3, Township of Cleland, District of Sudbury.
9. Survey the boundaries of Lot 10, Concession 11 and the boundaries of the

Summer Resort Surveys

Administrative District	Individual Parcels Surveyed		Subdivision Plans		Total
	Crown Fee Paid	Private No Fee	Crown Surveys Fee Paid	No Fee	
Chapleau		2			2
Cochrane		5		42	47
Erie					
Fort Frances		39		39	78
Geraldton				31	31
Gogama		2		11	13
Huron					
Kapuskasing		1		14	15
Kenora		97		152	249
Lindsay		3	1	32	36
North Bay	1	32		19	52
Parry Sound		69		95	164
Pembroke		4		45	49
Port Arthur		20		21	41
Kemptville		1			1
Sault Ste. Marie	1	20		50	71
Simcoe		1		6	7
Sioux Lookout		9		17	26
Sudbury	8	58	9	181	256
Swastika					
Tweed		22		139	161
White River		3		72	75
Totals:	10	388	10	966	1,374

The above includes 86 plans of subdivisions containing 976 lots.

west half of Lot 10, Concession 13, in the Township of Bedford, County of Frontenac.

10. Survey in Mining Claim L8080 to establish boundaries of buildings and improvements, Township of Lebel, District of Timiskaming.
11. Re-establishment and monumentation of portion B, D.H.O. plan and diversion of Boyne River, Oastler Lake Provincial Park.
12. Survey an access road, Wasaga Beach Provincial Park.
13. Survey additional lands acquired for park lands and waterfowl management area, Long Point Provincial Park.
14. Improvement surveys within the boundaries of the following parks;

Pembroke District

Algonquin Park

Kearney Lake Camp Grounds;
 Lake of Two Rivers Picnic Grounds;
 Pog Lake Camp Grounds;
 Madawaska Group Camp Grounds;
 Rock Lake Road and Camp Grounds;
 Coon Lake Camp Grounds;
 Opeongo Lake Road and Improvements;
 Logging Museum;
 Costello Creek Picnic Grounds and
 Museum;
 East Gate Headquarters Area.

Kemptville District

Rideau Park
 Silver Lake Park

Tweed District

Black Lake
Outlet Beach

Lindsay District

Emily Park
Serpent Mounds
Mark S. Burnham

Simcoe District

Sibbald Point
Earl Rowe (including contours of flood
plain)

Aylmer District

Long Point
Ipperwash
Clay Creek
Holiday Beach
John E. Pearce
St. Williams

15. Survey the boundaries of certain lands, required for Mitawin Provincial Park, Township of Salter, District of Sudbury.
16. Survey the boundaries of the Southampton Fish Hatchery Site, being parts of Lots 1 and H north of Clarendon Street, Town of Southampton, County of Bruce, to facilitate the sale of the property.
17. Survey a proposed extension of Earl Rowe Provincial Park, Township of Tosorontio, County of Simcoe.
18. Survey part of a proposed Provincial Park in the Township of Dunn, County of Haldimand.
19. Survey the boundaries of certain lands required for an aircraft base and access right of way, Township of Puslinch, County of Wellington.
20. Survey to define the westerly limit of Lot 14, Concession 2, and the Lake-shore Road, Township of North Gwillimbury, County of York.
21. Survey a parcel of land adjoining the new Sault Ste. Marie Airport, Township of Parke, District of Algoma.
22. Survey the right of way across certain mining claims of the Glenorchy Access Road, west of the Township of Bennett, District of Rainy River.
23. Survey the boundaries of certain lands required for a radio tower site, Township of Waterloo, County of Waterloo.
24. Survey a fire tower site, Township of Coulson, District of Cochrane.
25. Survey a fire tower site, Township of Aberdeen Additional, District of Algoma.
26. Survey the Deputy Chief Rangers Headquarters, Hemlo, on Cache Lake, Township 74, District of Thunder Bay.
27. Restoration and preservation by permanent monuments of original Crown survey points found by surveyors while carrying out surveys on privately owned lands. Standard instructions issued to 42 Ontario Land Surveyors in private practice.

Access Roads and Land Acquisition

Approval for the expenditure of \$268,000.00 was granted for the maintenance of access roads throughout the Province; 168 work permits for the construction of access roads were processed.

Requests were forwarded to the Department of Public Works for the acquisition of 112 properties for departmental purposes.

Provincial Park Surveys

Surveys of internal improvements within the boundaries of the following Provincial Parks were carried out:

Earl Rowe, Fitzroy, Outlet Beach, Wasaga Beach,
Lake Superior, Sibbald Point, Killarney, Algonquin,
Silver Lake, Black Lake, Long Point and Oastler Lake.

Boundary surveys for investigation work relative to boundaries were carried out in Earl Rowe, Fitzroy and Rideau River parks.

Cadastral and Topographic Mapping

PLANIMETRIC DETAIL MAPS

The following detailed planimetric plans and maps were completed:

Area or grid Maps	51	Township Maps	18
Composite Plans	2	Miscellaneous Plans	46
Part Lot Plans	78	Field Note Pages	28
Water Lot Plans	9		
Townships Annulled		Townships Annulled Partially	8
Completely	17		

General Administration, Survey Records and Map Distribution

MAP DISTRIBUTION

A decrease is to be noted in the overall distribution figure of all maps in comparison with the quantity distributed the previous fiscal year. This is due to the reduced demand for maps covering the areas adjacent to Highway 17 connecting Sault Ste. Marie with Port Arthur, which opened a little over one year ago, and due to the fact that our stock of the Provincial series of lithographed map sheets on the scale of 2 miles to one inch, were depleted and those required for district offices had to be ordered direct from the Department of Mines and Technical surveys in Ottawa, which figures are not included in this report.

A total of 22,119 copies of lithographed district and miscellaneous maps produced by this department were distributed, of which 1,970 copies were for the "Official Use" of this and other Departments of the Provincial and Federal Governments (see "Trend of Map Distribution Chart").

The map sheets of the National Topographic Series, produced and distributed by the Federal Department of Mines and Technical Surveys, as well as the sheets produced by the Army Survey Establishment Bureau of the Department of National Defence, Ottawa, for resale purposes, or for the "Official Use" of this and other departments of the Ontario Provincial Government were distributed in the total quantity of 47,712 copies (see "Trend of Map Distribution Chart"), an increase of 1,864 copies over that of the previous fiscal year. Of the total distributed, 15,141 copies were supplied for the "Official Use" of this department, including district offices, by the Department of Mines and Technical Surveys without charge.

The demand for copies of the Lake Simcoe and Trent Canal Nautical (Marine) charts published by the Canadian Hydrographic Service, Ottawa, has decreased; 367 copies were distributed but this figure is not shown in the total overall map distribution figure.

Twenty-one thousand eight hundred and forty-two (21,842) copies (see "Trend of Map Distribution Chart") of the Provincial Topographic Series, on the scale of two miles to one inch were distributed.

The summary of the total quantity of lithographed map sheets distributed is as follows:

National Topographic Series	69,554
Map No. 20	1,194
District Maps	11,215
Map No. 33A — Electoral	193
Map No. 28 — Geographical Townships	113
Miscellaneous Maps	9,404
Total	91,673

An increase of 300 "Over the Counter" individual cash sales was noted against that of the previous fiscal year, for a total of 8,200 transactions for the sale of lithographed map sheets, reproductions of survey records and other maps and plans. Seven hundred and seventy counter invoices for items sent out on credit were issued, being a decrease of 230 as compared to last year. Seven thousand eight hundred (7,800) letters of request from the public, covering similar transactions, were processed.

REPRODUCTIONS

Twenty-two thousand three hundred and forty-one square feet of photographic reproduction paper were consumed for reproductions of maps and survey records for departmental work, the survey branches of the Ontario Hydro-Electric Power Commission and the Ontario Department of Highways, other provincial government departments and commissions, Ontario Land Surveyors and the general public.

The consumption of sensitized paper used in the reproduction of various topographic map tracings, Crown land tracings and township prints, Georgian Bay Island map sheets, subdivision and summer resort plans of surveys, as well as other miscellaneous plans, by the dry process reproduction method, was reduced this year. A total of 344,006 square feet of sensitized paper and linen was consumed. A summary of the dry process material used, is as follows:

Blue or black line paper	333,909 square feet
Transparent linen— 1,590	
Transparent Plastic 2,907	4,497 square feet
Opaque Linen	5,600 square feet
Total	344,006

Reproductions required for mapping projects for this branch and various district offices, to be produced photographically by commercial firms, are not included in the above figures.

MAP MOUNTING AND BOOKBINDING

The following work in addition to other miscellaneous projects was handled by the map mounting and bookbinding staff maintained by this Section for departmental requirements including the preservation of old survey plans.

Map Mounting

New plans mounted	
Summer Resort Subdivision and Composite	345
Miscellaneous lithographed maps and prints	334
Old plans remounted	
Original township surveys and patent plans	109
Mining locations	432
	<hr/>
Total	1,220

Bookbinding

New bindings	
Field notes of current surveys	21
Miscellaneous	20
	<hr/>
Total	41

Rebindings	
Patent References	20
Field notes	26
	<hr/>
Total	46

Miscellaneous	
Documents and pages laminated	2,197

Crown Survey Records

The use of original Crown survey records for reproduction or reference purposes by the survey branches of the Hydro-Electric Power Commission of Ontario, the Ontario Department of Highways, Ontario Land Surveyors in private practice and the general public, continues to increase.

Three thousand four hundred and fifty-eight (3,458) cards were typed covering plans being recatalogued and filed in the Survey Record Catalogue along with six hundred (600) cards copied from information contained in the Island and Boundary Commission Surveys book, and filed. In addition, 763 entries were made in the Surveyor's designation number card index of surveyed parcels, including change of file numbers. The returns of surveys of 102 plans of subdivisions made for summer resort purposes and 132 plans of miscellaneous surveys consisting of the surveys of pipe line right-of-ways, composite plans made on Crown Lands other than individual summer resort location surveys, as well as 24 books of field notes were registered, catalogued and filed. The returns of seven Municipal Surveys were also entered in the records.

The refileing of all plans of surveys, with the exception of the plans of surveyed mining claims presently filed on current correspondence files, into the vertical filing system, was continued this fiscal year. Approximately 34,500 flat, current correspondence files were examined. Approximately 8,816 plans of surveys, descriptions, field notes and affidavits were removed and refiled into the vertical filing system. This required the typing of approximately 3,553 filing labels which was done partly by the summer casual help and partly by the full time staff. All survey record material removed from the files was microfilmed.

Certain records, considered to be of enduring value, were transferred to the

Department of Public Records and Archives for permanent retention and preservation. These consisted of plans, reports and notes of the Upper Canada - United States Boundary survey by David Thompson of Williamstown in 1837 under the Treaty of Ghent, consisting of four volumes containing ninety (90) hand drawn maps, the original report and some traverse notes; a copy of a plan of Old Fort Frontenac and town plot of Kingston dated at Quebec, October 15, 1784 as surveyed by John Frederick Holland and signed by Samuel Holland, Surveyor General; a petition and report concerning the site of Magnetawan Village dated 1873; a report on the survey by J. W. Fitzgerald in connection with the Georgian Bay railway right of way, made in 1875; as well as certain material in connection with surveys made on the Ottawa and Petawawa rivers in 1847.

Survey Party Equipment

Three field survey parties under staff surveyors, carrying out summer resort location subdivision surveys, retracement surveys, and other miscellaneous surveys, were supplied and equipped for field work. Major equipment purchased for field use included one diamond drill, two chain saws, one three-hundred-foot chain, two 18 H.P. Outboard Motors, and two vehicles.

The necessary quantity of survey monuments to cover the survey programme were distributed to various district offices for the use of Ontario Land Surveyors on the staff, or in private practice who were making retracement surveys, individual or subdivision surveys for summer resort purposes on Crown Land under instructions from the Department, for Municipal Surveys being made under departmental instructions, or for other miscellaneous surveys.

Accounts Payable, Supplies and Equipment

Over 1,100 invoices and accounts payable were examined, checked, recorded and classified prior to passing to the Accounts Branch for payment. These were for travel and disbursements of members of the staff, purchases made for equipment, supplies, maintenance and other operating costs, and for surveys made on Crown Lands by Ontario Land Surveyors in private practice. Sixty-four property receipts, transfers and write off forms were prepared for the Equipment Inventory records. Approximately one thousand requisitions were prepared covering purchases of supplies and equipment, maintenance and other operations.

Cartographic Mapping and Geographical Nomenclature

MAP PRODUCTION

To maintain a supply of copies for distribution until such time as the new base for map 21 "Southern Ontario" of the Territorial Series is completed, 3,000 copies in full colours of the present map 21a were obtained from existing lithographic plates.

The new base map for Map 24 (replacing Map 24a) "Districts of Kenora and Rainy River" of the Territorial Series, scale 8 miles to 1 inch, having been completed prior to April 1st, 1962, was reproduced in 7 colours. The new base was prepared for reproduction in Black and Dark Blue as compared with the old map 24a base which was in Black only. This map has the improved colour tones, shows Department of Lands and Forests administrative district boundaries and a standardized grid system for locating geographic townships, similar to the other map sheets of this series.

DESIGN, COMPILATION AND FAIR DRAWINGS OF MAPS

Progressive work was carried on throughout the first 9 months of 1962-63 on the preparation of the new multi-colour base for Map 21 (replacing map 21a) "Southern Part of Ontario", scale 8 miles to 1 inch, of the Territorial Series.

Much work was involved in the conversion, by photographic methods, of the original base drawings (Black only) to the new Black - Dark Blue basic outlines.

The work on this map was stopped in December, 1962, due to the necessity of producing Map R 163 "Recreational Areas and Parks" folder.

Work was continued on the new multi-colour base for Map 23 (replacing map 23a) throughout the first 9 months of the 1962-63 period. It also was stopped relative to producing Map Folder R 163.

In October, 1962, a small map at a scale of 2 miles to 1 inch was prepared of the Geographical Townships of Bruton and Clyde, as a supplement to the existing map 47a Algonquin Provincial Park. These townships are now included within the limits of the Park.

In December, 1962, all work in progress was stopped in order to proceed as rapidly as possible with the planning, designing and production of a new map folder now identified as R 163 "Recreational Areas and Parks within a 50 mile radius of Metropolitan Toronto".

EDITING OF GEOGRAPHICAL NOMENCLATURE ON MAPS

During the fiscal year, geographical names to appear on new maps, being produced by other departments of federal and provincial governments, were checked for correctness of spelling, form and application of such names.

The groups of maps are as follows:

- (i) Geological maps — for the Ontario Department of Mines — 11.
- (ii) Maps of the "National Topographic" Series at scale of 1/50000 — 5.
- (iii) Maps of the "Military Town Plan" Series at scale of 1/25000 — 25.
- (iv) Marine Charts produced by the Canadian Hydrographic Service, various scales: — 11.

REFERENCE LIBRARY INFORMATION

Expansion of the Index of Geographical Names of Ontario has been continued, the majority of such work being the addition of 6000 new entries and 2000 entries fully revised, a considerable part of this work was relative to the cross-reference of prefixed names. All names finally approved by the Canadian Permanent Committee on Geographical Names were entered into the index currently as received.

All incoming reference copies of new maps of the National Topographic Series, Military Town Plans and Geological Survey Aeromagnetic Series were indexed and filed.

LANDS SECTION

Land Administration

To ensure that Lands Section continues to provide direct and efficient service to the people, several amendments and additions were made to The Public Lands Act and to policy procedure.

An amendment to The Public Lands Act requires that at least 25 per cent of

the total frontage of areas fronting on water be reserved for public use; procedure relating to zoning plans was improved; regulations governing the sale or leasing of public lands were passed; extension of the time for performance of a term or condition of a sale or lease was provided; provision was made for obtaining possession of public land after the revocation, cancellation or expiration of a sale or lease or where a person is in possession or occupation without lawful authority; it was established that a beach used for travel by the public is not by reason only of such use a highway within the meaning of any Act; the right of the Crown to one quarter of land subdivided into lots, blocks or parcels and the related procedure was clarified.

Because ever-increasing numbers of people are ranging farther afield in pursuit of hunting and angling and other outdoor recreation and it was considered undesirable to hamper their freedom of movement, a procedure was established to permit the use of public land for a period of less than three weeks without charge.

A Hunt Camp identification card to be posted on the building showing the name of the owner and the Land Use Permit number, assists inspectors to determine, in the absence of the owner, whether or not the camp is covered by proper authority.

Procedure was established and forms designed for use in connection with claims to land resulting from 60 years adverse possession for use by officers of the Department, applicants for land and their solicitors or other representatives. This has resulted in more rapid and efficient dealings with this type of application.

Authority for the disposal of land in Provincial Forests was extended to include certain forms of recreational land use.

Policy procedure was laid down under Sections 26 and 27 of The Public Lands Act to provide for uniformity of action and to ensure that all occupants of land are fully informed of their position and the reason why continued occupation is illegal.

Arrangements were concluded with the Department of Highways to clarify the responsibility of both Departments with respect to the erection of signs on public land adjacent to highways.

Provision was made for the establishment of subdivision control areas under Section 15(2) of The Public Lands Act; for the sale and patent of public land for school and church purposes, and for the leasing of land to municipalities for municipal park purposes at reasonable cost.

In connection with land inspections, more accurate and detailed supporting data are being required in the fixing of land and timber values.

Summer resort lands, both private and commercial, continued to be in steady demand. The Department opened up a number of new lakes and provided additional sites on others. Careful planning of total recreational facilities was strongly emphasized and the programme was designed to provide a balanced land use in any given area. The ground work was laid for completing lake by lake studies with a view to allocating cottage sites, areas of scenic beauty, picnic sites, public reserves, etc., prior to opening the lake.

Inspection of land covered by old sales and locations was accelerated with a view to closing out the files by issuing patent or effecting cancellation.

A block of land at MacDiarmid was transferred to the Federal Government for the use of local Indians.

The programme of designating as Crown reserves areas of public land for general public use, Departmental tower sites, reforestation and seed collection was continued.

Policy was established providing for the sale of land on highways leased for

commercial purposes after a lease has been in effect for five years. For the first time a commercial highway location was offered for lease by public auction and with very favourable result.

Land disposition under The Ontario-Dominion Agreement was extended to 1968 by an amendment to The Veterans' Land Act (Dominion). There were no new agreements entered into. Four small holdings and three agricultural transactions were concluded.

The graphs and tables forming part of this section show the total number of all sales, assignments and cancellations made, and leases, licences of occupation and land use permits issued.

ENGINEERING SECTION

Buildings or Service Improvements

A wide variety of buildings, renovations or service improvements totalling 38 projects were completed throughout the province, the more notable being a new tree seed extraction plant constructed at Angus and a new sewage treatment plant constructed at Maple. Other construction was carried on in the Gogama, Lake Erie, Sudbury, Lindsay and Tweed Districts.

Water Resources

APPROVAL OF DAMS

The approval of 36 dams for construction in the fiscal year April 1, 1962, to March 31, 1963, required the examination of 65 plans.

The approval of 1 navigation channel, 1 channel improvement project and 1 bridge and causeway involved the examination of 3 further plans.

LICENCES OF OCCUPATION

Four licences of occupation were cancelled during the year, the licensees having no further use for the dams.

Two further licences of occupation will be cancelled in the current year, in order that the lands may be covered by a new licence of occupation to issue.

WATER POWER LEASE AGREEMENTS

Water Power Lease Agreement No. 63 was issued to The Hydro-Electric Power Commission of Ontario for Red Rock Falls Generating Station on the Mississagi River, in the District of Algoma.

Water Power Lease Agreement No. 64 was issued to The Hydro-Electric Power Commission of Ontario for Silver Falls Generating Station on the Kaministiquia River, in the District of Thunder Bay.

Water Power Lease Agreement No. 65 issued to Great Lakes Power Corporation, Limited, to amend Water Power Lease Agreement No. 18 in respect of Summer Resort Location J.C. 376.

Water Power Lease Agreement No. 66 issued to The Hydro-Electric Power Commission of Ontario to amend Water Power Lease Agreement No. 31 in respect of additional lands required by the Commission at Hound Chute.

Water Power Lease Agreement No. 61, in the name of The Algoma Steel Corporation, Limited, for Water Power Location K.G. 5 at Steephill Falls, was amended in respect of the North Limit of Location K.G. 5.



Tickell Wilderness Area (Gull Island in the Bay of Quinte), the first area selected under The Wilderness Areas Act.

FIELD INSPECTIONS

16 field trips were made to inspect the condition of dams, investigate complaints in regard to water levels and to attend meetings to discuss the operation of dams.

DAM RECONSTRUCTION

The reconstruction of 10 dams was recommended to the Department of Public Works, continuing the programme of re-building abandoned logging dams in the interests of forest protection, conservation and fish and wildlife propagation. Assistance was given the Public Works engineers in determining a satisfactory regulated water level and obtaining stream flow and historical data useful in designing the new dams.

Seven projects were completed during the year and 3 partially completed, which will be finished in 1963. The operation of the completed dams becomes the responsibility of the Department of Lands and Forests.

In addition, 2 repair projects were completed by the Department of Public Works and turned over to the Department of Lands and Forests for operation.

Hatcheries - Design and Construction

At the Chatsworth fish hatchery and trout rearing station, the second phase of reconstruction was completed by the Department of Public Works, and the outdoor rearing station is now ready for full-scale operation. The facilities include fourteen, 25-foot diameter, reinforced-concrete, circular rearing ponds; twenty, 50-foot, reinforced-concrete raceways; four large, lined, earth ponds and two display ponds required for holding stocks of various fish species for exhibitions. A further small project is required for final grading, surface drainage, landscaping, road surfacing and completion of outdoor illumination.

Preliminary planning including field investigations was undertaken for the proposed reconstruction of the Normandale (Walsh) fish hatchery and trout rearing station.

Twenty new plywood hatchery troughs were constructed and installed by the District staff in the temporary hatchery building at the White Lake bass ponds, to replace the old troughs which had previously been discarded from another hatchery.

Preliminary planning and field work were commenced for the proposed conversion of the former Mount Pleasant hatchery site into a public fishing area.

A feasibility study was commenced for a proposal to develop the Rondeau marsh as a habitat for waterfowl, and another study is in progress regarding possible utilization of the Crown land area in the Holland marsh.

LAND USE PLANNING SECTION

Land use planning in the Department of Lands and Forests has been described as the planning for the best management of the renewable natural resources of the province, excepting agriculture; and even here a close relationship must of necessity exist since there is a close relationship between the management of the land for the production of agricultural products and the other renewable natural resources. The other renewable natural resources are the timber products, fish and wildlife, and, what strictly speaking may not be called a resource but rather a manipulation of the other resources for man's use — recreation.

It is the purpose of the Land Use Planning Section to guide the field offices and main office in a concerted effort to produce the best over-all management plans

which will not only provide for the very best possible management of each resource but will also take into consideration the need for co-operation and integration of the management plans for all uses.

LAND USE PLANS

A great deal of progress has been achieved in the districts in the preparation of their land use plans. Discussions were held with the districts in the field and the way was cleared for the actual submission of plans by most of the districts.

The technical basis for the land use plan is the site classification evolved by the Research Branch, which permits a recommended use capability map being made according to the actual capability of the soil to produce the different products of the land. Progress is being made in this work by the Research Branch but there are areas yet that have not been mapped. In such areas the work is proceeding, using the best information available.

PRIVATE LANDS LIAISON COMMITTEE

This is an interdepartmental committee appointed by order-in-council, consisting of three members of the Department of Agriculture and three members of the Department of Lands and Forests, of which the Supervisor of the Land Use Planning Section is the chairman. One of the problems in land use planning in Southern Ontario is that of determining the amount and location of agricultural land which will be needed for agricultural use and what should be channeled into other uses. This is particularly necessary in planning for timber production since land planted up with trees at considerable cost, is necessarily dedicated to tree production until at least the maturity of the crop, (at least 40-50 years) or the effort put into tree planting is wasted. While some such waste is unavoidable, proper planning should reduce this to a minimum. The committee arranged for collaboration between the Department of Agriculture, particularly the Soils Department of the Ontario Agricultural College, and the site section of the Research Branch of the Department of Lands and Forests with a view to deciding upon a common classification. This is now under advisement.

RECREATIONAL LAND USE PLANNING

The revised instructions issued last year to the districts has resulted in a clearer conception of the zoning aspects of the plans and has provided a more uniform classification across the province. Each district plan was reviewed at Main Office and a certificate signed by the Minister giving each plan legal status under the Public Lands Act.

A meeting of the District Advisory Committee on Recreational Land Use Planning was held during the year, in each district north of, and including, Pembroke and Parry Sound Districts. The Recreational Land Use Plan will eventually form a part of the Land Use Plan of each district when the first plan is submitted.

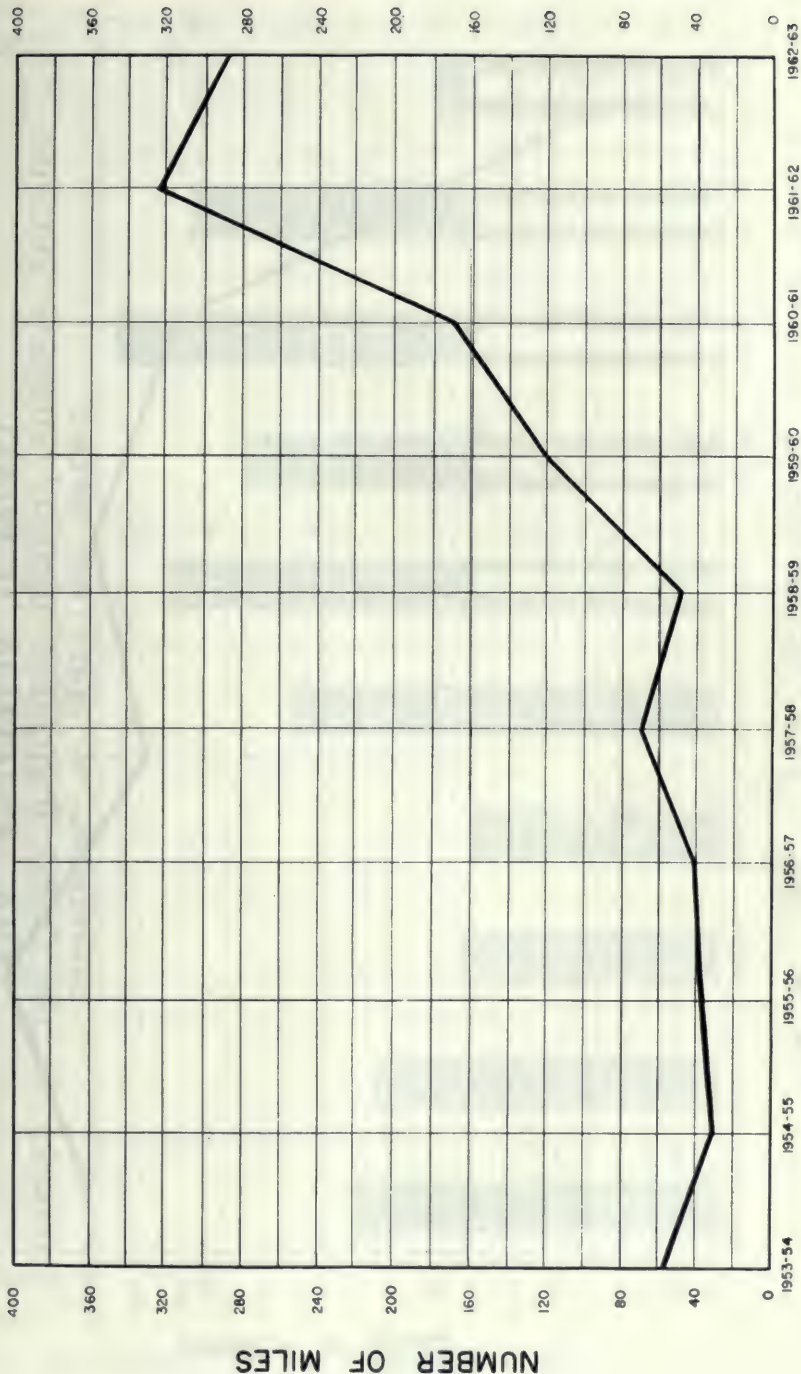
Wilderness Areas

During the year there was no new wilderness area set aside. The Nature Reserves which are proposed for establishment under the Wilderness Areas Act are under process of being established. Reports will be made on them during 1963 and then they will be set aside by regulation.

Progress is being made on the establishment of a twelve hundred square mile wilderness area north of Lake Superior known as the Pukaskwa. This will constitute an important addition to the area set aside as wilderness in Ontario.

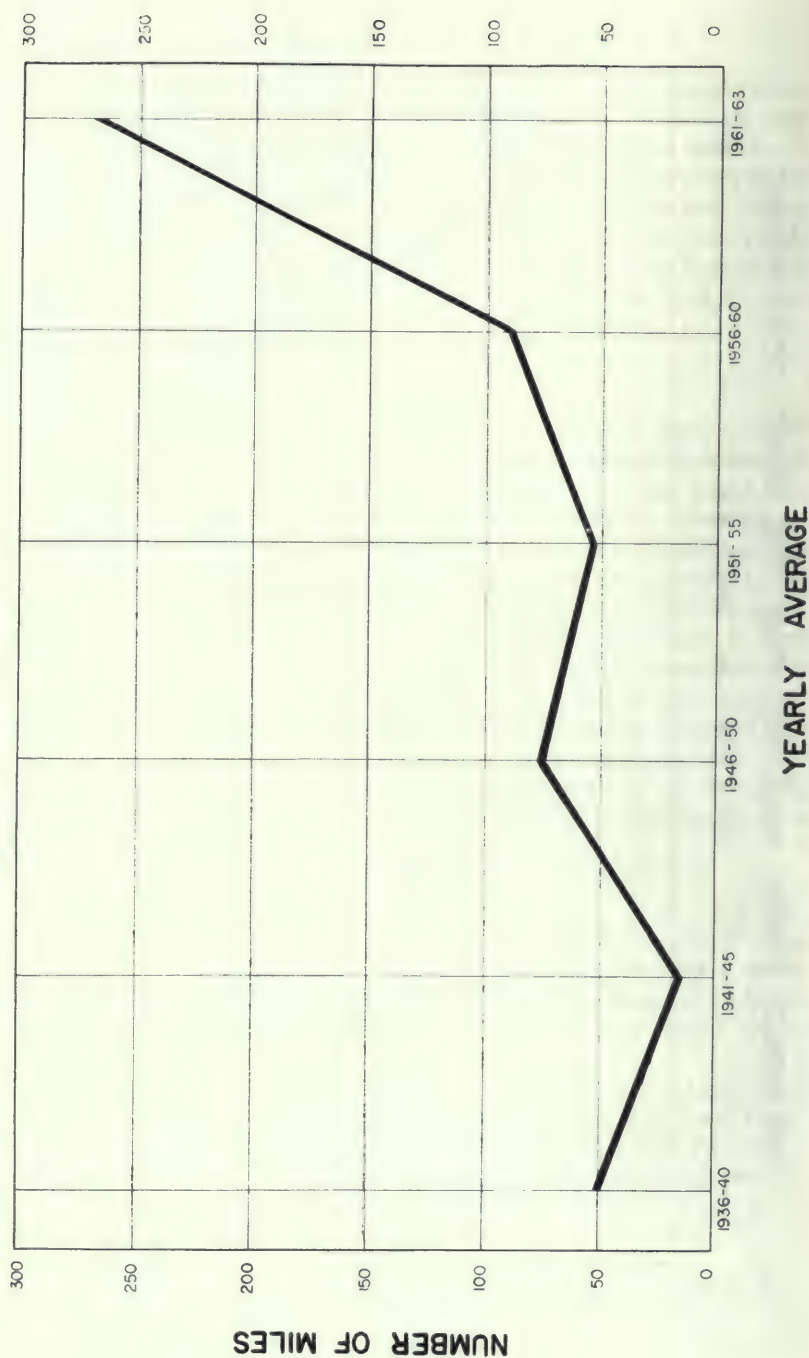
TREND OF RETRACEMENT SURVEYS

PREPARED FROM MILEAGE FOR THE PAST TEN YEARS
1953-54 to 1962-63



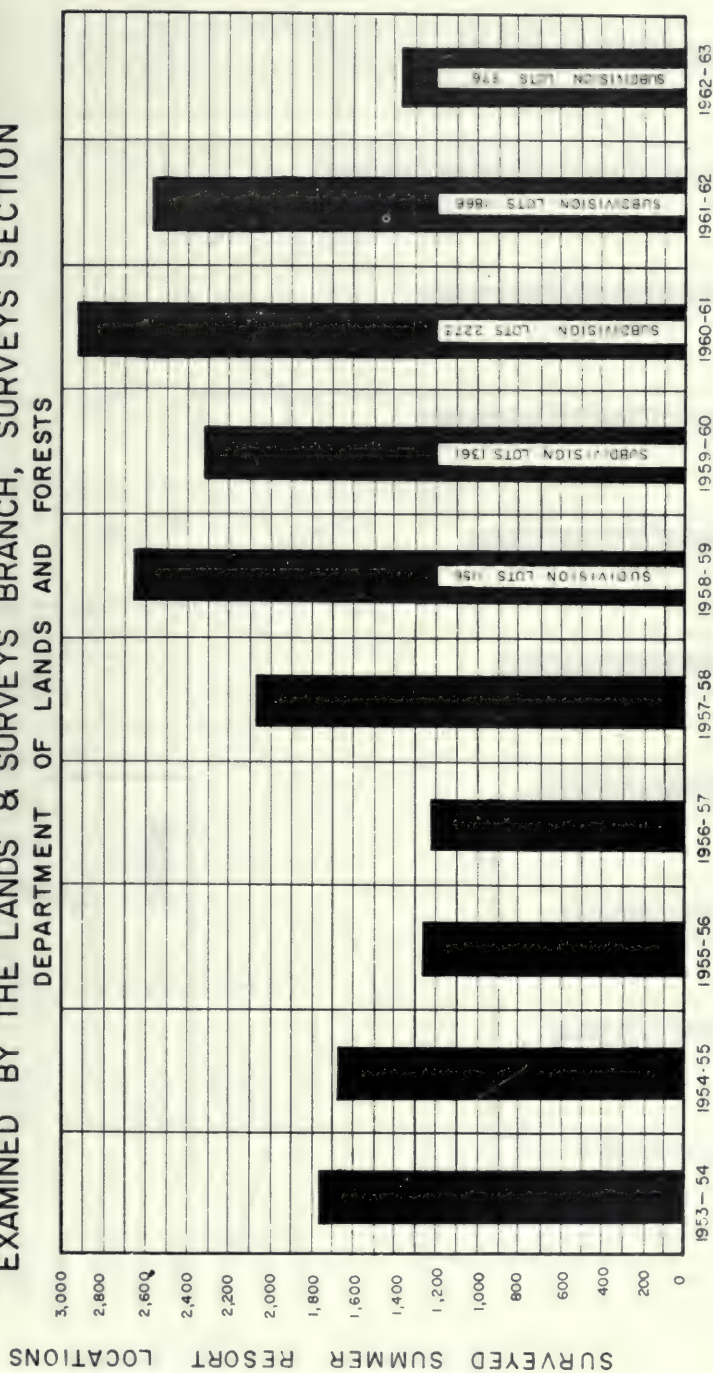
FISCAL YEAR ENDING MARCH 31st.

TREND OF RETRACEMENT SURVEYS



SURVEYED SUMMER RESORT LOCATIONS ON CROWN LAND

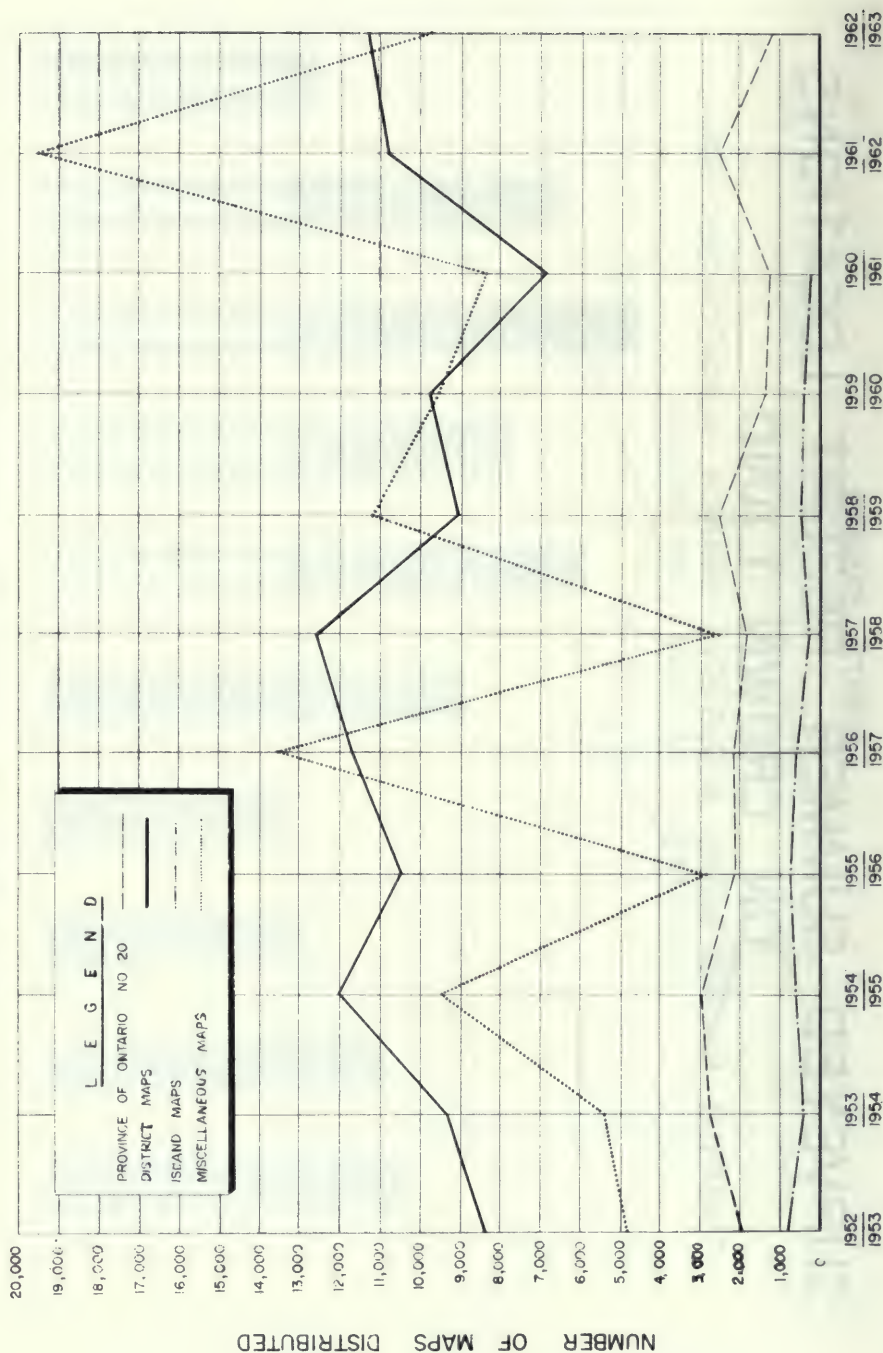
EXAMINED BY THE LANDS & SURVEYS BRANCH, SURVEYS SECTION
DEPARTMENT OF LANDS AND FORESTS



FISCAL YEAR ENDING MARCH 31st.

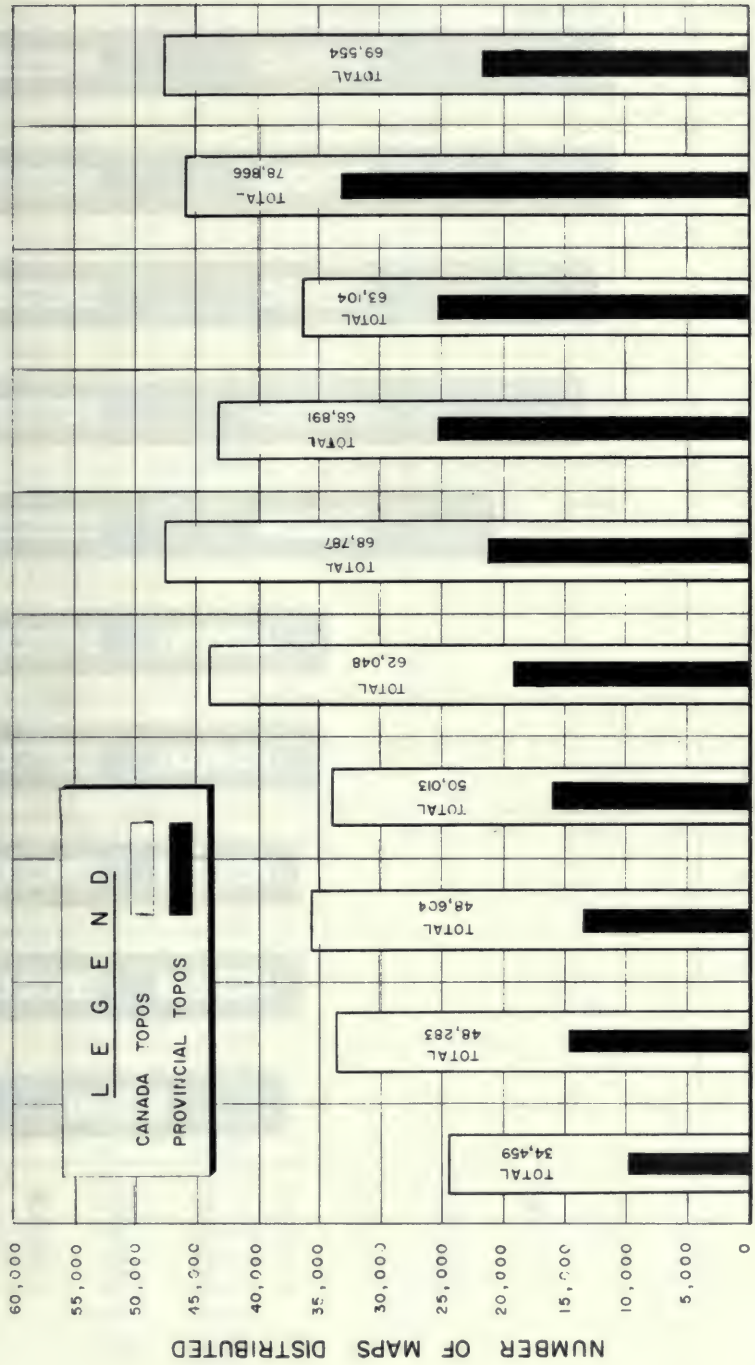
TREND OF MAP DISTRIBUTION

PROVINCIAL ISSUES
DEPARTMENT OF LANDS AND FORESTS



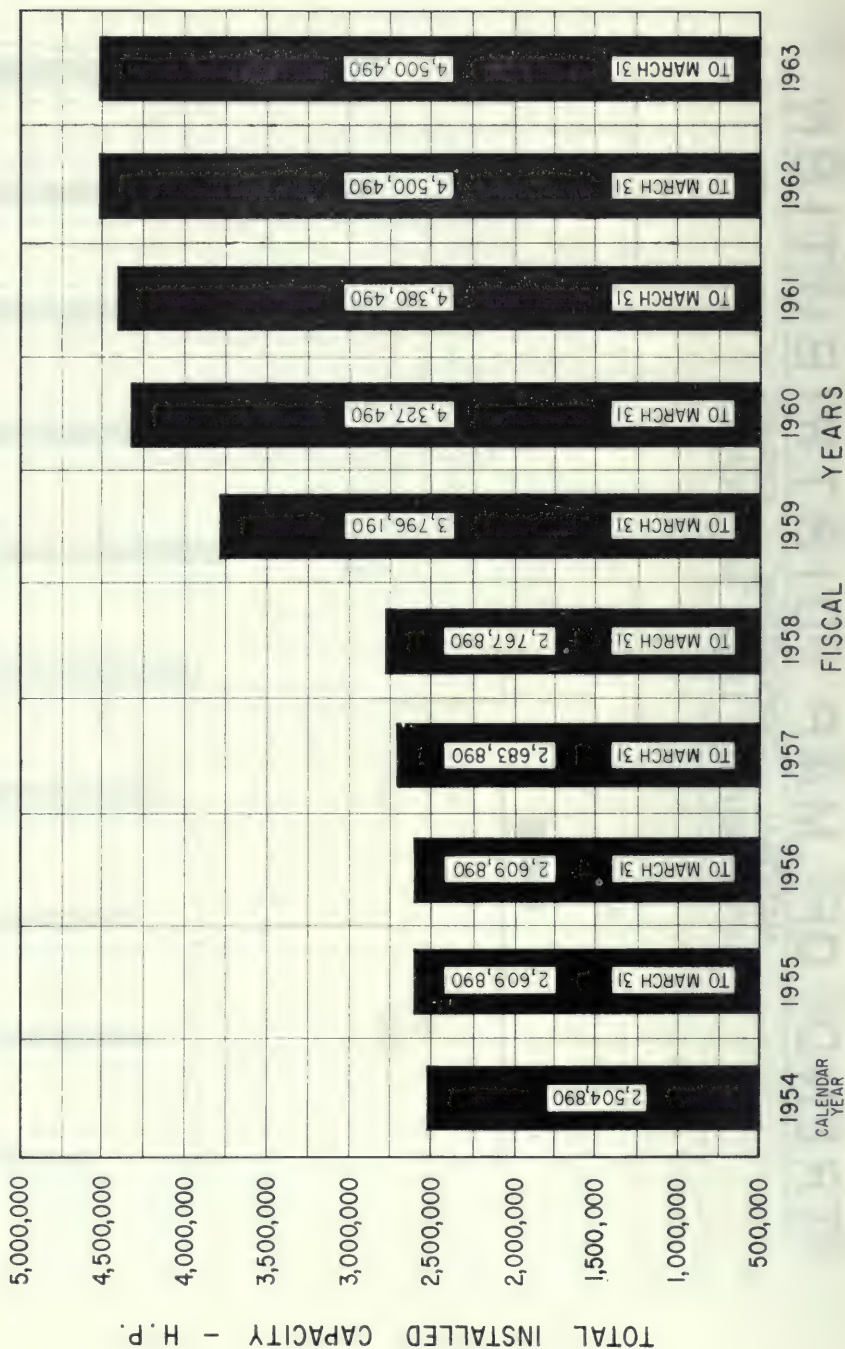
TREND OF MAP DISTRIBUTION

NATIONAL TOPOGRAPHIC SERIES
DEPARTMENT OF LANDS AND FORESTS



FISCAL YEAR ENDING MARCH 31ST.

INSTALLED CAPACITY IN HORSE-POWER OF ALL PLANTS UNDER CROWN LEASE FOR YEARS 1954-1963



AGRICULTURAL LAND

The fiscal year ending March 31st, 1963

Administrative District	Sales		Cancellations		Assignments		Patents	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Cochrane	1	16.00	2	187.00			7	545.32
Fort Frances							3	416.75
Kapuskasing			17	1356.97	1	48.00	18	1707.68
Kenora			3	470.50			5	517.81
Lake Simcoe			1	5.00				
Lindsay							1	100.00
North Bay							2	250.00
Parry Sound			2	90.00				
Pembroke			1	100.00				
Port Arthur			15	1982.00			27	3932.44
Sault Ste. Marie							1	74.00
Sioux Lookout			1	155.00				
Sudbury	2	160.25	4	499.75	1	160.00	11	1204.666
Swastika	1	72.00	13	1021.75	3	237.50	6	463.29
Tweed	1	36.00					3	300.00
Totals	5	284.25	59	5867.97	5	445.50	84	9511.956

SUMMER RESORT

The fiscal year ending March 31st, 1963

Administrative District	Sales		Cancellations		Assignments		Patents	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Chapleau	2	2.01					5	5.73
Cochrane	19	11.831					20	11.947
Fort Frances	46	43.78					45	48.98
Geraldton	3	6.34					8	10.19
Gogama	2	6.88					5	13.27
Kapuskasing	14	12.723			2	.50	13	13.742
Kenora	134	144.626	4	4.06	1	.87	143	156.372
Lake Erie	12	3.581					8	1.961
Lake Simcoe	38	32.369	1	.746	2	1.47	44	41.119
Lindsay	155	88.663	1	.54	1	.60	186	120.177
North Bay	47	45.01	3	2.85			79	79.16
Parry Sound	291	284.716	8	10.262	4	3.38	382	404.300
Pembroke	25	27.73					31	35.461
Port Arthur	25	24.972	1	.76	1	1.50	60	71.102
Sault Ste. Marie	33	33.120	2	2.56			61	94.673
Sioux Lookout	14	43.47	2	2.129			14	41.58
Sudbury	138	123.987	2	3.76			171	192.259
Swastika	12	7.107					15	12.026
Tweed	107	112.682	1	.91			104	116.479
White River	14	12.65					24	23.59
Totals	1131	1068.247	25	28.577	11	8.32	1418	1494.118

LAND FOR SPECIAL USE
The fiscal year ending March 31st, 1963

Administrative District	Sales		Cancellations		Patents		Quit Claim Deeds	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Chapleau	1	3.04			1	3.04		
Cochrane	3	7.747			2	3.04		
Fort Frances	5	163.68			5	165.58		
Geraldton	4	341.41			6	999.08		
Gogama	1	.46			1	.11		
Kapuskasing	4	22.072			9	105.102		
Kemptville					2	269.22	3	171.00
Kenora	12	60.484			19	66.953		
Lake Erie	1	.009			3	1.085	2	61.64
Lake Huron							2	150.00
Lake Simcoe	7	5.573					1	5.53
Lindsay	1	12.9			4	15.98		
North Bay	6	10.146			5	14.246		
Parry Sound	8	20.908			11	150.355	1	1.00
Pembroke	3	187.33			6	289.134	1	50.00
Port Arthur	5	659.068			9	769.327		
Sault Ste. Marie	5	65.42			3	55.04		
Sioux Lookout	4	4.12	1	0.46	5	5.94		
Sudbury	9	176.956	1	79.75	17	414.435		
Swastika	3	4.23			7	54.477		
Tweed	16	778.339	1	100.00	22	1405.75	13	948.0267
White River	2	3.50			4	67.47		
Totals	100	2527.392	3	180.21	146	4863.112	23	1387.1967

CITIES, TOWNS AND TOWNPLOTS
The fiscal year ending March 31st, 1963

Administrative District	Sales		Cancellations		Assignments		Patents		Quit Claim Deeds	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Chapleau	2	.21					2	.21		
Cochrane			1	.10	1	.084	4	.718		
Geraldton	8	1.356	17	3.31	4	2.011	14	4.276		
Gogama	7	1.81	1	.22			7	1.63		
Kapuskasing	13	2.799	3	.638			16	11.462		
Kemptville							1	.63		
Kenora	4	.814					3	.284		
Lake Erie									2	.154
Lake Huron							1	.461	3	26.55
North Bay							1	.19		
Parry Sound	1	.8								
Pembroke	4	14.57					4	3.965		
Port Arthur	1	.2								
Sault Ste. Marie							1	1.01	1	1.5
Sioux Lookout	8	3.10	2	.66	1	.46	16	5.49		
Sudbury	5	.732	1	.11	1	.11	6	.922		
Swastika	6	1.610	4	.95			11	2.979		
Tweed							1	.17		
White River	18	3.94	2	.33	1	.22	11	2.15	1	.11
Total	77	31.941	31	6.318	8	2.885	99	36.547	7	28.314

FREE GRANT LAND
RETURNED SOLDIERS AND SAILORS
The fiscal year ending March 31st, 1963

Administrative District	Cancellations		Patents	
	No.	Acres	No.	Acres
Kapuskasing -----	2	150.00		
Kenora -----			2	234.05
Pembroke -----			1	100.00
Port Arthur -----	1	158.00	1	80.00
Sault Ste. Marie -----	1	100.00	1	74.00
Sudbury -----	1	159.00		
Swastika -----	3	395.25	1	161.50
Totals	8	962.25	6	649.55

FREE GRANT LAND
The fiscal year ending March 31st, 1963

Administrative District	Cancellations		Patents	
	No.	Acres	No.	Acres
Kapuskasing -----			1	152.00
Kenora -----			4	502.6667
Parry Sound -----	49	4876.50	10	980.00
Port Arthur -----	6	798.00		
Sudbury -----	2	317.50		
Swastika -----			1	157.00
Tweed -----	9	1024.50	8	1498.00
Totals	66	7016.50	24	3289.6667

PATENTS OFFICE

Statement of Patents, etc., issued during the year ending March 31st, 1963.

Public Land Patents -----	1502	
Free Grant Patents -----	24	
Free Grant Patents Soldiers & Sailors -----	6	
Patents & Transfers (Town Lots) -----	106	
Miscellaneous Documents -----	169	
Release of Pine -----	10	1817
<hr/>		
Crown Leases -----	40	
Algonquin Park Leases -----	6	
Rondeau Park Leases -----	5	
Water Power Lease Agreements -----	5	56
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Licenses of Occupation -----	47	47
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Licenses of Occupation Cancelled -----	79	
Crown Leases Cancelled -----	31	110
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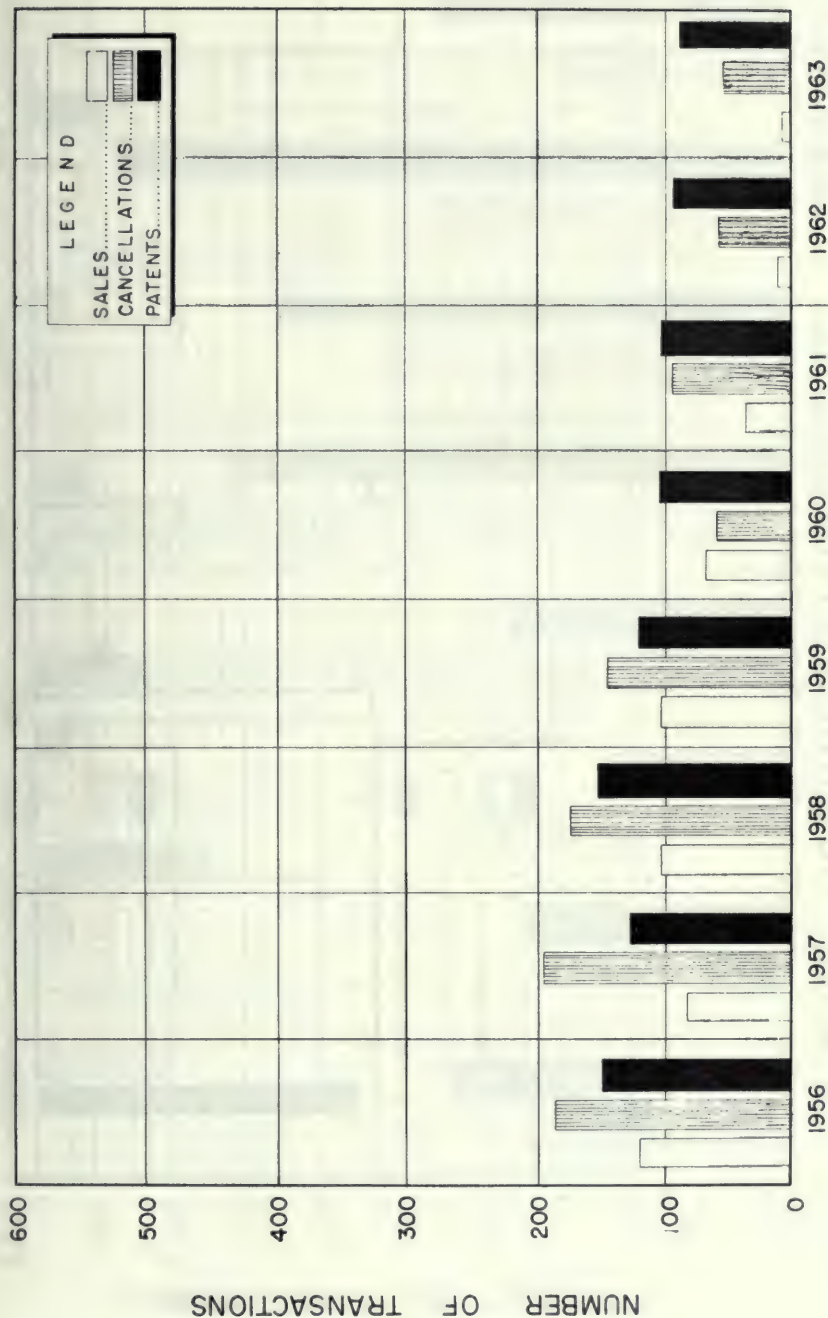
LAND USE PERMITS ISSUED (From April 1st, 1962, to March 31st, 1963)

Administrative District	Hunt Camp No.	Hunt Camp Acres	Trapper's Camp No.	Trapper's Camp Acres	Residence No.	Residence Acres	Agricultural No.	Agricultural Acres	Marsh No.	Marsh Acres	Mill Site No.	Mill Site Acres	Sugar Bush No.	Sugar Bush Acres	Boat Houses No.	Boat Houses Acres	Miscellaneous No.	Miscellaneous Acres	Departmental Houses No.
Chapleau	29	29.00	36	36.00	17	17.00	1	5.00			8	227.00			2	1.25	20	1936.45	142
Cochrane	58	54.50	3	3.00	28	24.00	5	262.00	7	325.00	5	30.00			3	.75	32	1704.95	60
Port Frances	8	6.75	33	27.75	3	3.43			1	50.00	8	74.00			25	8.50	22	866.25	121
Geraldton	14	14.00	9	9.00	66	64.80	2	11.00							6	1.75	60	3894.30	143
Gogama	30	30.00	20	20.00	12	9.63	1	10.00			11	109.00			2	.50	18	1215.10	133
Kapuskasing	27	27.00	12	11.50	19	17.17	8	100.00	3	71.00	10	293.17			3	.75	38	2120.62	187
Kemptville																			66
Kenora	18	17.70	23	21.50	11	10.70			1	25.00	11	39.50			13	2.25	25	1313.20	129
Lake Erie					93	23.25									4	1.00			156
Lake Huron							1	16.00									2	.20	110
Lake Simcoe	3	3.00					1	15.00											263
Lindsay	241	241.00			7	7.00	1	100.00							12	3.00	16	5.75	215
North Bay	178	178.00	7	6.50	14	14.00	3	167.00			2	10.00			10	2.50	8	10.00	175
Parry Sound	472	472.00	12	12.00	41	40.52	1	50.00			10	154.00	1	100.00	42	10.50	30	875.50	136
Pembroke	281	281.00			16	15.00			2	220.00	5	65.00	2	125.00	37	10.00	42	204.23	141
Port Arthur	6	6.00	3	3.00	2	11.00					17	283.60			10	3.25	84	175.97	179
Sault Ste. Marie	46	44.70	24	24.00	2	3.00	1	3.00			12	23.00			1	.25	20	482.40	121
Sioux Lookout	23	25.00	37	37.00	40	44.33	2	5.00	1	3.00	3	22.00			7	2.25	47	9228.40	247
Sudbury	231	231.00	12	12.00	35	42.32	8	127.50			15	76.20			65	17.75	24	1802.10	156
Swastika	10	10.00	2	2.00	8	7.50	12	234.00	1	50.00	11	218.00	1	20.00	9	2.25	14	424.00	33
Twined	477	477.00	1	1.00	8	12.00	1	7.405	1	100.00	18	111.00			10	3.50	12	265.50	94
White River	9	9.00	5	4.00	19	14.97	1	4.00	1	100.00	2	34.73			6	2.60	46	790.35	203
TOTALS	2163	2156.65	241	230.25	441	381.62	49	1116.905	17	844.00	152	1786.25	4	245.00	265	74.60	572	30242.69	3210

TOTAL NUMBER OF PERMITS — 3,904 (not including Departmental Houses)

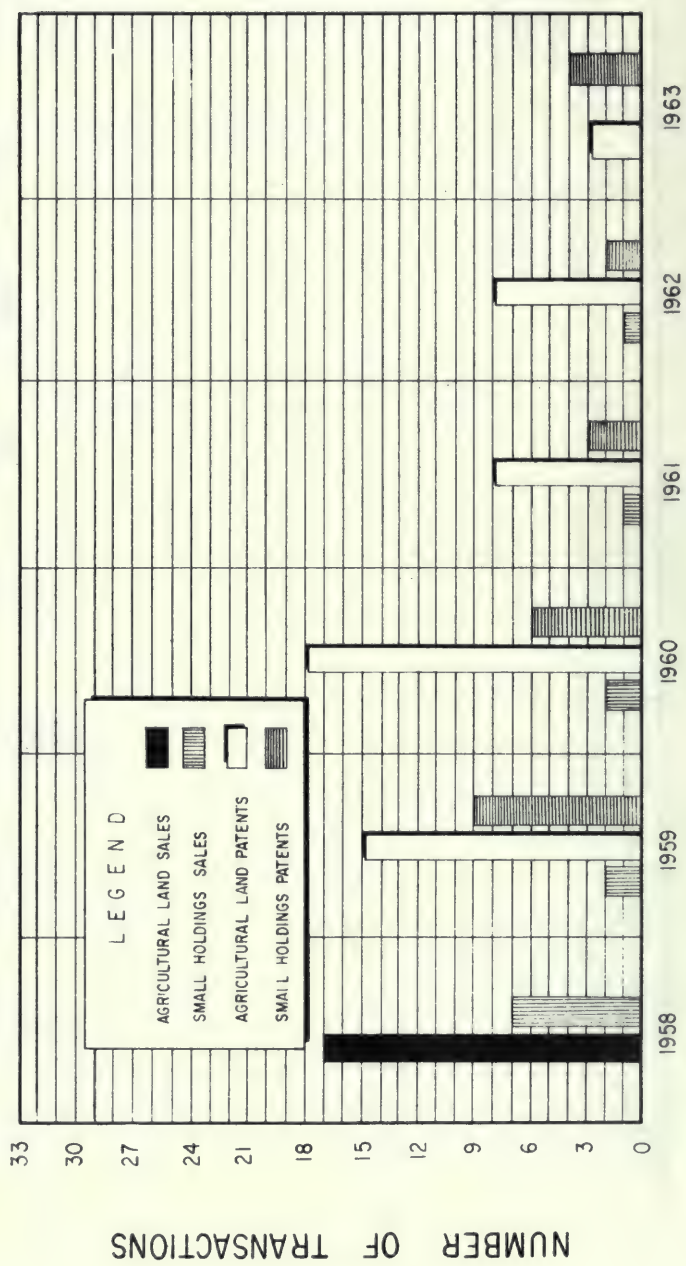
TOTAL NUMBER OF ACRES — 37,077.965

AGRICULTURAL LANDS IN SALE TOWNSHIPS

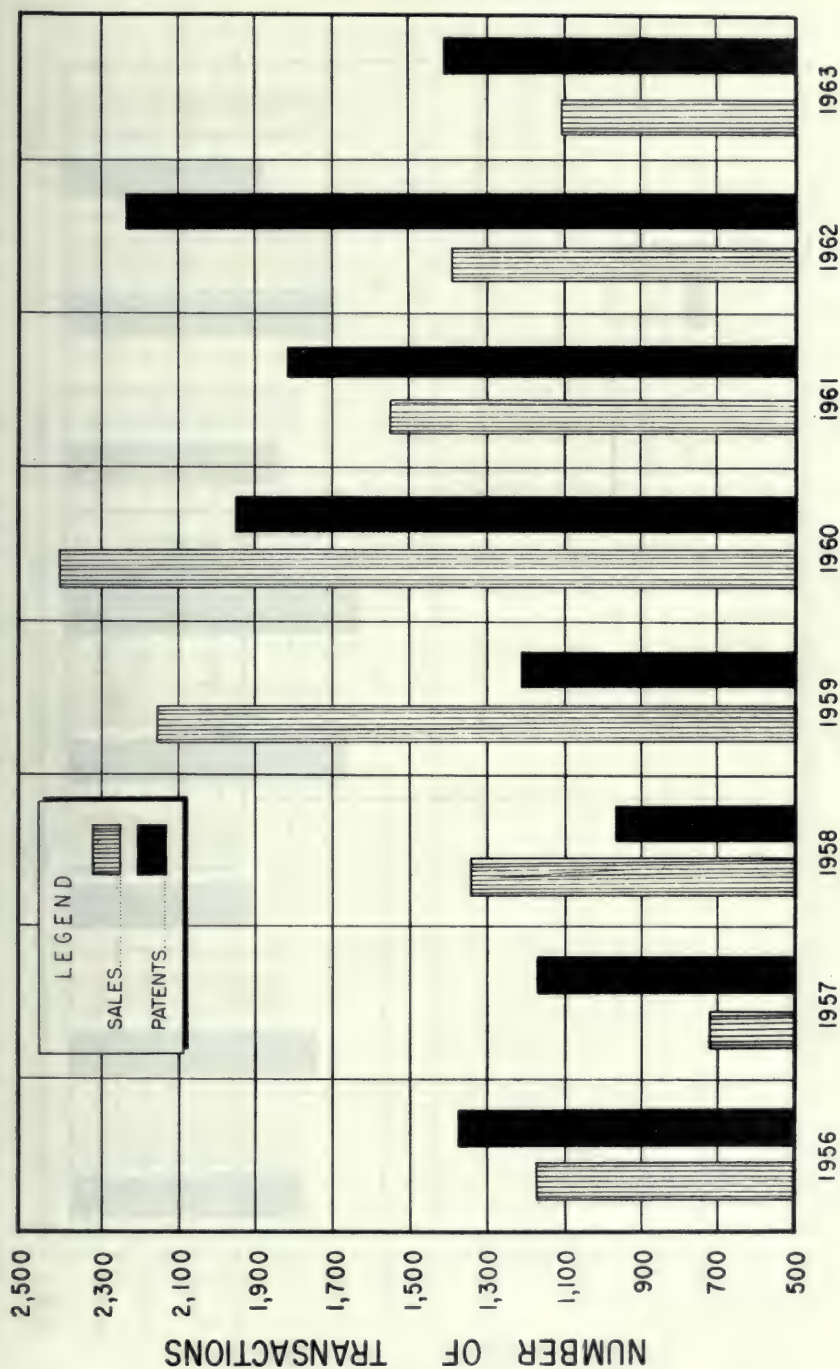


FISCAL YEAR ENDING MARCH 31st.

TRANSACTIONS UNDER THE ONTARIO DOMINION - PROVINCIAL AGREEMENT SECTION 38 OF THE VETERANS LAND ACT

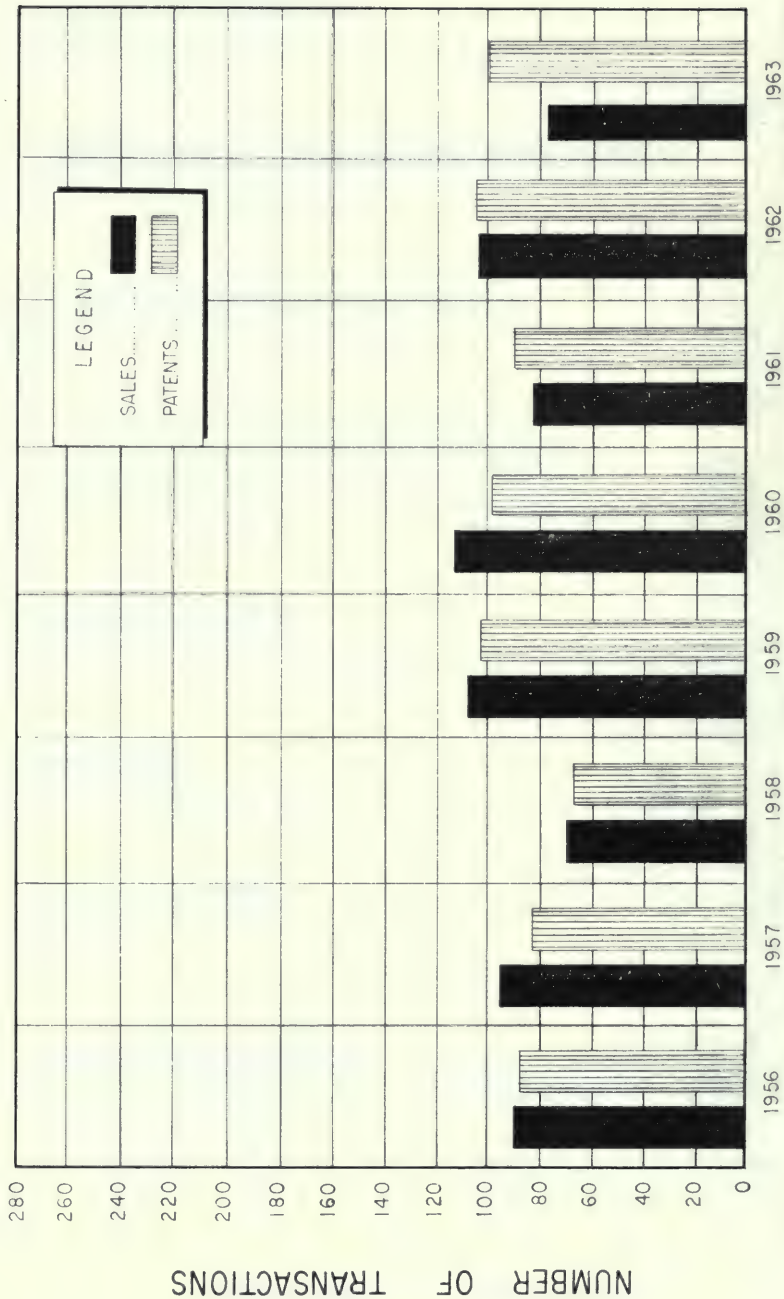


SUMMER RESORT LANDS



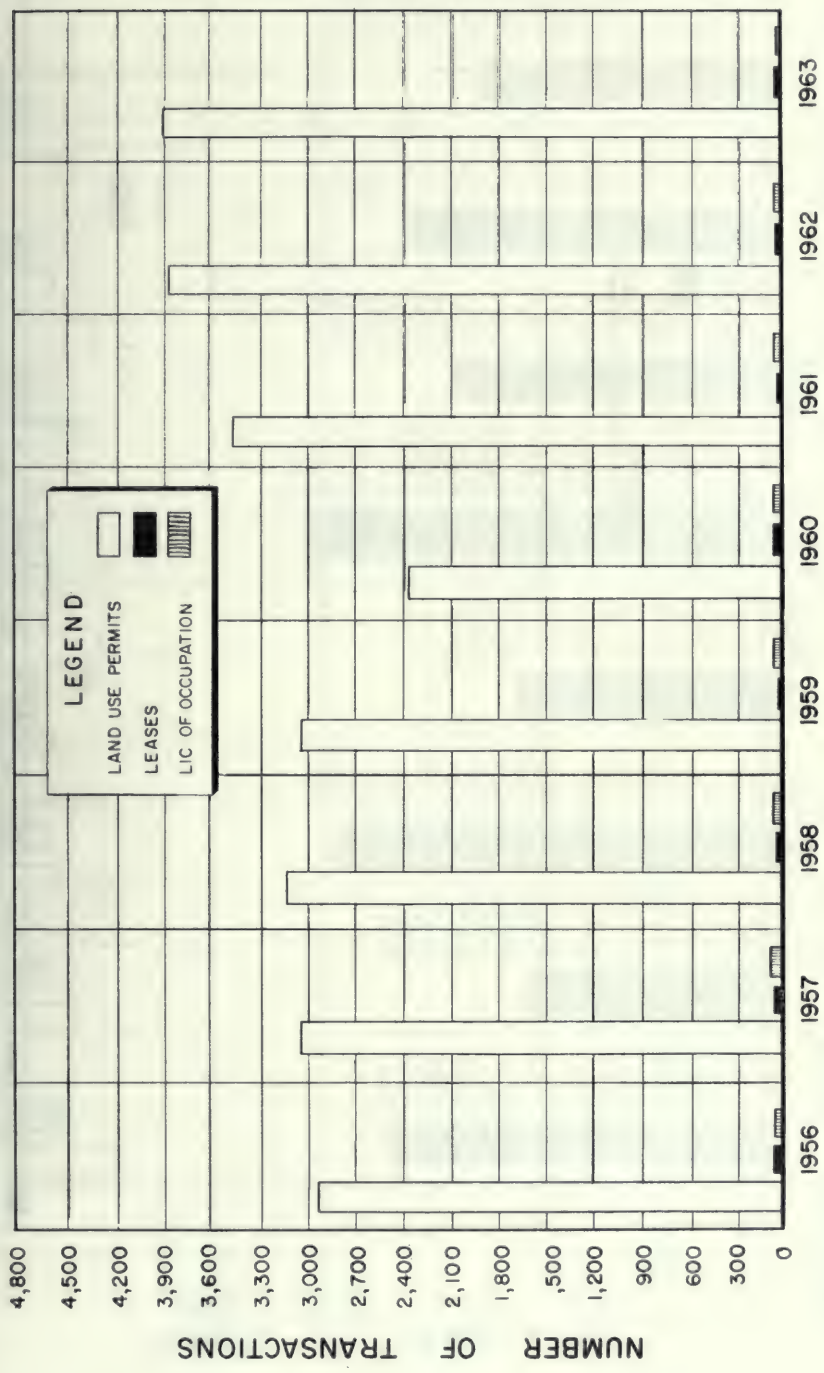
FISCAL YEAR ENDING MARCH 31st.

CITY, TOWN AND TOWNSITE LANDS



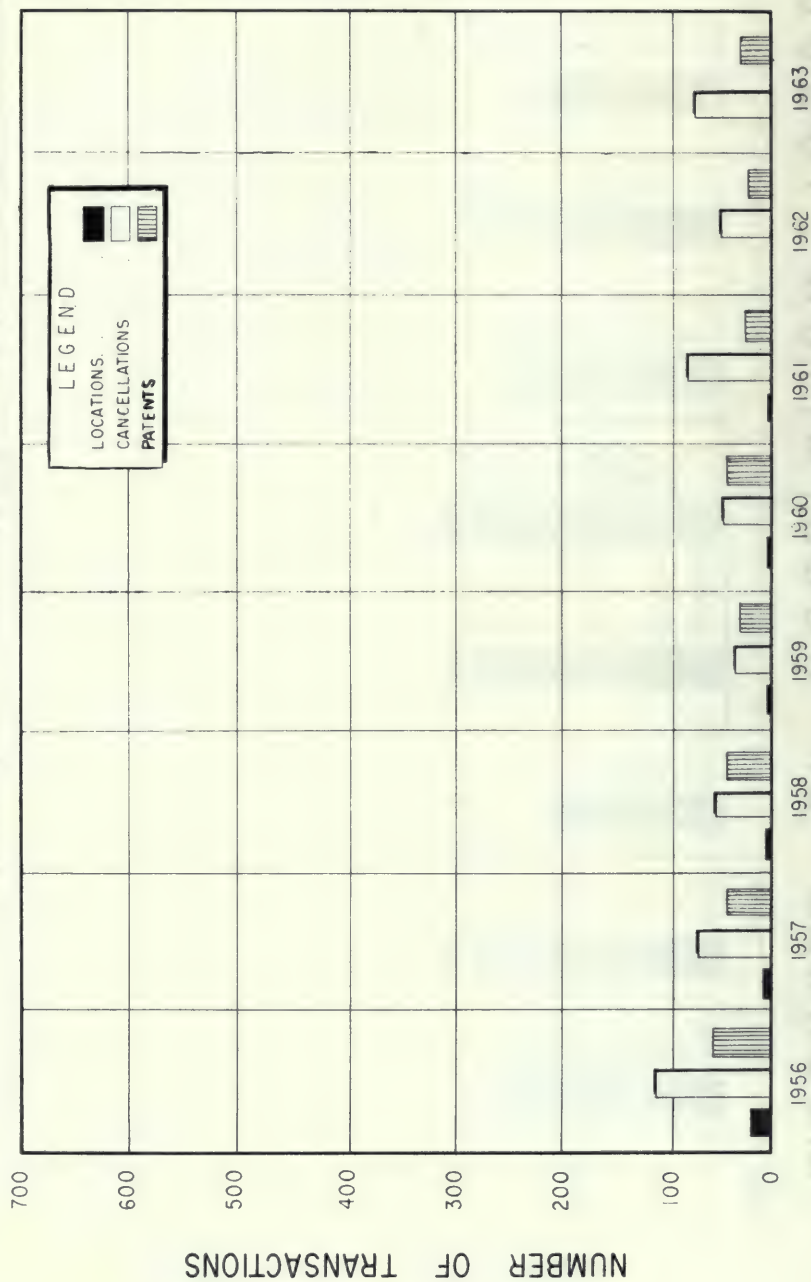
FISCAL YEAR ENDING MARCH 31st.

LAND USE PERMITS, LEASES AND LICENCES OF OCCUPATION ISSUED



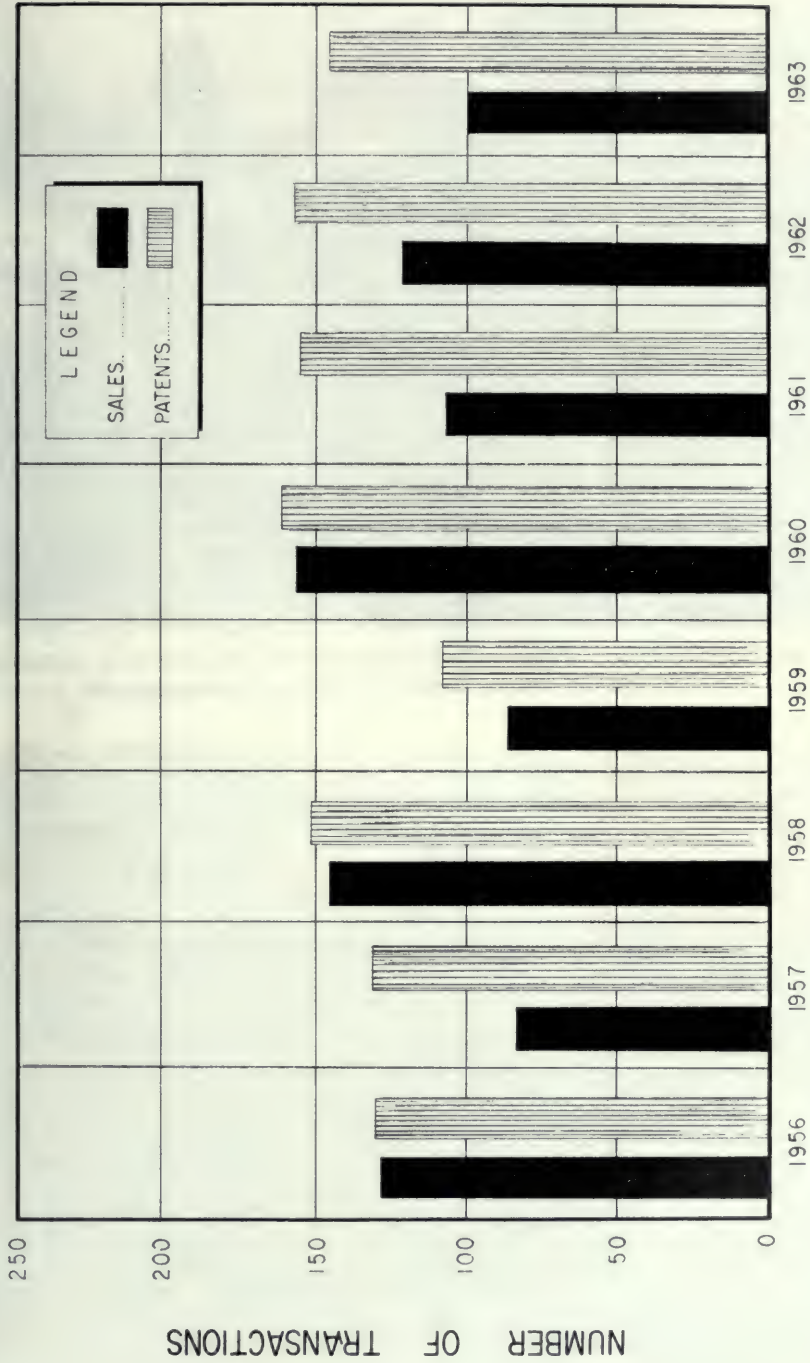
FISCAL YEAR ENDING MARCH 31 st.

AGRICULTURAL LANDS IN FREE GRANT TOWNSHIPS INCLUDING SOLDIERS' LAND



FISCAL YEAR ENDING MARCH 31st.

LANDS FOR SPECIAL USE



FISCAL YEAR ENDING MARCH 31st.



A Conservation Officer examines the licence tag on the deer of a successful hunter at the Big Game Checking Station in Gravenhurst.



An aerial view indicates the popularity of ice fishing on Lake Simcoe.

LAW BRANCH

Responsibilities of Law Branch

COUNSELLING:

Advising upon the legal position of the Department in all matters affecting the Department. Interpretation of Statutes and regulations.

PREPARATION OF

Legislation, regulations, recommendations to Council, agreements, leases, licences, pleadings, office consolidations of statutes and regulations administered by the Department and briefs and memoranda on special subjects.

RECORDING OF CROWN LAND TRANSACTIONS AND PREPARATION OF TITLE DOCUMENTS:

Maintenance of records of Crown land including sales, leases, licences, cancellations, foreitures, etc., thereof and advising the public and others on such records; preparation and engrossing of title documents disposing of Crown land, including letters patent, leases and licences of occupation; compilation of statistics and incidental correspondence.

OTHER LEGAL SERVICES:

Including settlement of claims and disputes, collection of bad accounts, conducting litigation, title searching and conveyancing.

LEGISLATION

At the Session of the Legislature, which convened on the 27th day of November, 1962, and prorogued on the 26th day of April, 1963, The Killarney Recreational Reserve Act, 1962-63, The Kinsmen's Club of Kenora Act, 1962-63, The National Radio Observatory Act, 1962-63 and The Ontario Harbours Agreement Act, 1962-63, were enacted and amendments were made to The Conservation Authorities Act, The Game and Fish Act, 1961-62, The Grand River Conservation Act, 1938, The Lakes and Rivers Improvement Act, The Parks Assistance Act, The Provincial Parks Act and The Public Lands Act.

THE KILLARNEY RECREATIONAL RESERVE ACT, 1962-63

This Act established as the Killarney Recreational Reserve a tract of land in the districts of Algoma, Manitoulin, Nipissing, Parry Sound and Sudbury, described in a schedule to the Act. The Act provides that the Minister shall formulate a land-use plan for the development of the public lands in the Reserve that have a potential for recreational use and that the Minister may take such measures as he deems proper for the implementation of the land-use plan or any part of such plan. Regulations may be made respecting the care, preservation, improvement and control and management of the Reserve.

LAW BRANCH

Supervisor: G. H. FERGUSON

SOLICITOR

S. J. ANTONETTE

PATENTS OFFICE

Head Clerk: E. F. EATON

SECRETARY

Stenographic Staff

THE KINSMEN'S CLUB OF KENORA ACT, 1962-63

This Act deleted the habendum in letters patent dated the 30th day of March, 1951, granting Location LK-551, which is south of the Township of Haycock in the District of Kenora, to the Kinsmen's Club of Kenora, and provides that the letters patent will contain a condition that the lands shall be used only as a community camp operated on a non-sectarian and non-profit basis.

THE NATIONAL RADIO OBSERVATORY ACT, 1962-63

This Act placed locations GT-148, GT-149, GT-150 and GT-151 in the Township of White in the District of Nipissing, under the administration and control of the federal government for the maintenance and operation of a National Radio Observatory.

THE ONTARIO HARBOURS AGREEMENT ACT, 1962-63

This Act confirms, from the provincial point of view, an agreement between Ontario and Canada establishing the harbours which were public harbours at the date of Confederation. The agreement provides that the mines and minerals are administered by the Province and also confirms certain grants and quit claims which are listed in schedules to the agreement.

THE CONSERVATION AUTHORITIES AMENDMENT ACT, 1962-63

Section 5 of The Conservation Authorities Act was amended to clarify the intention of the section and clearly provide that an application under the section may be brought by any three municipalities which are situate within the proposed area to be set up.

A new section 5a was added to the Act to provide that all watersheds under the jurisdiction of an authority shall be adjoining.

Section 6 of the Act was amended to make it clear that one municipality may request a meeting to consider the enlargement of the area over which the authority has jurisdiction.

Subsection 1 of section 20 of the Act was amended to extend the area over which a conservation authority might pass a regulation regarding the dumping of fill. Now an authority may make such regulations effective over any defined part of the area over which the authority has jurisdiction in which, in the opinion of the authority, the control of flooding or pollution or the conservation of land may be affected by the placing or dumping of fill. This section was also amended to provide that a magistrate, in making a conviction under the section, has power to order the removal of buildings, structures or fill and in default of such removal the authority may remove the same at the cost of the person convicted.

Section 21 of the Act was amended to provide that regulations regarding internal management of authorities need be approved only by the Minister rather than the Lieutenant Governor in Council.

Subsection 8 of section 25 was amended to change the words "chief officer" to "chairman or vice-chairman of the authority".

Section 35 was amended by adding a new subsection which clearly provides that tenants of conservation authority lands may be taxed for municipal purposes.

THE GAME AND FISH AMENDMENT ACT, 1962-63

Subsection 3 was added to section 6 of this Act to authorize the Minister to enter into agreements with owners of land for the management of the land for the

purposes of the management, perpetuation and rehabilitation of wildlife resources.

Section 11 was amended to provide that conservation officers are not required to investigate offences under subsection 1 of section 17.

Section 31 was enlarged to include construction camps, lumber camps and mining camps in the section.

A new section 37*a* was added to the Act to require licensing of guides in areas prescribed by the regulations. Also re-introduced into the Act was the principle of non-residents being required to be accompanied by a guide while hunting deer or moose in prescribed areas.

An amendment was made to section 42 to permit the trapping of black bear under terms and conditions prescribed by the regulations.

Paragraph 15 of section 83 was amended to include lands in respect of which management agreements have been entered into. Paragraph 22*a* of section 83 will provide for regulations prescribing the times during which and the terms and conditions on which black bear may be trapped.

Powers to make regulations respecting the licensing of guides have been added to section 84.

THE GRAND RIVER CONSERVATION AMENDMENT ACT, 1962-63

Subsection 3 was added to section 28 of The Grand River Conservation Act, 1938, to make it clear that tenants of commission lands are liable to taxation for municipal purposes.

THE LAKES AND RIVERS IMPROVEMENT AMENDMENT ACT, 1962-63

Section 9 of The Lakes and Rivers Improvement Act was repealed and two new sections substituted in lieu thereof. These two sections require separate approval of the location of a dam and of the plans and specifications of a dam. The new sections provide for the procedures to be followed by an applicant for either approval.

New section 9*a* provides that under certain circumstances the Minister may appoint an officer to be in charge of a lake or river or works or improvements thereon and to regulate the use of the lake, river, works or improvements in such manner as seems best calculated to afford persons having conflicting interests on the land or river a fair and reasonable use of the water. The section also authorizes the Department to repair, reconstruct or remove dams where the owner refuses to do so after a Minister's Order.

Subsection 1 of section 11 was amended to conform with the changes made in section 9.

Section 22*a* was added to the Act to authorize the Minister, an engineer and all officers, servants or agents to enter lands and premises other than private dwellings, stores, storehouses, offices or farm buildings in the performance of their duties under the Act.

Section 26 was amended to require all persons floating timber down a lake or river to keep the timber under control and to recover and remove from the lake or river any timber that drifts out of control or causes an obstruction or hazard. In addition, provision was made for the removal of such timber at the expense of the owner.

THE PARKS ASSISTANCE AMENDMENT ACT, 1962-63

Section 1 of The Parks Assistance Act was amended by adding a definition of the word "municipality", which new definition includes a Band under the Indian

Act (Canada) that is permitted to control, manage and expend its revenue monies under section 68 of that Act.

THE PROVINCIAL PARKS AMENDMENT ACT, 1962-63

Subsection 1 of section 11 of The Provincial Parks Act was amended to permit the district forester or superintendent in charge of a provincial park to open or close to travel any portage in the provincial park.

THE PUBLIC LANDS AMENDMENT ACT, 1962-63

Section 67*b* was added to The Public Lands Act. Subsection 1 provides that unless the Minister otherwise directs, every patent, lease or licence of occupation issued under this Act shall contain a provision to the effect that the surface rights in any public or colonization road or any highway crossing the land granted, leased or licensed, are exempt therefrom. Subsection 2 provides that every patent, lease or licence of occupation issued under the Act shall reserve to the Crown such percentage, if any, of the surface rights of the land as the Minister deems necessary for road purposes. Subsection 3 provides that where there were reservations of percentages for road purposes and the rights have not been exercised before the 1st day of May, 1963, the reservation shall be deemed to be a reservation of the surface rights only.

Effective Dates

With the exception of The Conservation Authorities Amendment Act, 1962-63, The Game and Fish Amendment Act, 1962-63 and The Grand River Conservation Amendment Act, 1962-63, the Statutes came into force on Royal Assent. With the exception of The Parks Assistance Amendment Act, 1962-63 and The Lakes and Rivers Improvement Amendment Act, 1962-63, which received Royal Assent on December 20th, 1962, the date of Royal Assent was April 26th, 1963. Except the amendment to section 35 of The Conservation Authorities Act, The Conservation Authorities Amendment Act, 1962-63, came into effect on April 26th, 1963. The exception was deemed to come into force on January 1st, 1963. The amendment to The Grand River Conservation Act, 1938, came into force on January 1st, 1963. The Game and Fish Amendment Act, 1962-63, came into force on Proclamation. By a Proclamation dated May 30th, 1963, this Act and The Game and Fish Act, 1961-62, were proclaimed as of the 1st day of June, 1963.

REGULATIONS

44 regulations made under the authority of the Statutes administered by the Department of Lands and Forests were approved and filed during the fiscal year from April 1st, 1962 to March 31st, 1963. The following are the regulations which were approved and filed:

The Conservation Authorities Act

O.Reg. 80/62 — New

O.Reg. 95/62 — New

O.Reg. 96/62 — New

- Fill — Grand Valley Conservation Authority
- Fill — Sydenham Valley Conservation Authority
- Fill — Mattagami Valley Conservation Authority

O.Reg. 166/62 — New

O.Reg. 255/62 — New

O.Reg. 294/62 — Revokes and replaces
O.Reg. 96/62

O.Reg. 313/62 — Revokes and replaces
O.Reg. 95/62

O.Reg. 323/62 — New

O.Reg. 338/62 — New

O.Reg. 339/62 — Revokes and replaces
O.Reg. 137/61

O.Reg. 62/63 — New

The Game and Fisheries Act

O.Reg. 87/62 — Amending Reg. 204 of
R.R.O. 1960

O.Reg. 105/62 — Amending Reg. 204 of
R.R.O. 1960

O.Reg. 131/62 — Amending O.Reg. 87/62

O.Reg. 132/62 — Amending O.Reg. 264/61

O.Reg. 133/62 — New and Revokes
O.Reg. 234/61, 242/61,
243/61, 271/61, 280/61,
300/61

O.Reg. 134/62 — New

O.Reg. 165/62 — Amending O.Reg. 133/62

O.Reg. 176/62 — Revokes and replaces
O.Reg. 237/61, 262/61

O.Reg. 204/62 — Revokes Schedules 28,
35 & 56 to Reg. 188 of
R.R.O. 1960

O.Reg. 222/62 — New

O.Reg. 233/62 — Amending O.Reg. 133/62

O.Reg. 234/62 — New

O.Reg. 235/62 — Amending O.Reg. 133/62

O.Reg. 242/62 — Amending O.Reg. 237/61

O.Reg. 254/62 — Revokes and replaces
O.Reg. 320/61

O.Reg. 256/62 — Amending O.Reg. 322/61

O.Reg. 257/62 — Amending Reg. 188 of
R.R.O. 1960

O.Reg. 258/62 — Amending O.Reg. 222/62

O.Reg. 259/62 — Revokes and replaces
O.Reg. 321/62

O.Reg. 272/62 — Amending O.Reg. 133/62

O.Reg. 285/62 — Amending O.Reg. 352/61

O.Reg. 292/62 — Amending O.Reg. 133/62

O.Reg. 295/62 — Amending O.Reg. 176/62

O.Reg. 300/62 — Amending Reg. 204 of
R.R.O. 1960

O.Reg. 65/63 — Amending Reg. 188 of
R.R.O. 1960

O.Reg. 66/63 — Amending Reg. 189 of
R.R.O. 1960

— Conservation Areas — Metropolitan
Toronto and Region Conservation
Authority

— Conservation Areas — Big Creek
Region Conservation Authority

— Fill — Mattagami Valley
Conservation Authority

— Fill — Sydenham Valley
Conservation Authority

— Fill — Sixteen-Mile Creek
Conservation Authority

— Conservation Areas — Grand Valley
Conservation Authority

— Fill — Moira River Conservation
Authority

— Fill — Junction Creek Conservation
Authority

— Fish Sanctuaries — Waters Set
Apart

— Fish Sanctuaries — Waters Set
Apart

— Red Bay of Lake Huron Fish
Sanctuary — Waters Set Apart

— Hunting Licences — Deletion of Deer
and Moose Skin Shipping Coupon
from Resident Hunting Licences

— Open Seasons — Deer, Moose, and
Game Birds

— Open Season — Black Bear

— Open Season — Deer on Griffiths
Island and Main Duck Island

— Open Seasons — Fur-bearing
Animals

— Crown Game Preserves

— Sale of Bass and Trout

— Open Seasons — Deer, Moose,
Partridge and Pheasant

— Open Season — Bobwhite Quail

— Open Seasons — Deer, Moose,
Partridge and Pheasant

— Open Seasons — Fur-bearing
Animals

— Hunting in Lake Superior
Provincial Park

— Hunting in Provincial Parks — Holi-
day Beach, Presqu'île and Rondeau

— Conroy Marsh Crown Game Preserve

— Sale of Bass and Trout

— Hunting on Crown Lands

— Open Seasons — Deer, Moose,
Partridge and Pheasant

— Hunting on Crown Lands — town-
ships of Bruton and Clyde

— Open Seasons — Deer, Moose,
Partridge and Pheasant

— Open Seasons — Fur-bearing
Animals

— Fish Sanctuaries — Waters Set
Apart

— Crown Game Preserves

— Annual Commercial Fishing Report

The Provincial Land Tax Act, 1961-62

O.Reg. 343/62 — Revokes and replaces
Reg. 497 of R.R.O. 1960

— Rate of Tax, Costs and Exemptions

The Provincial Parks Act

O.Reg. 99/62 — New

— Guides in Quetico Provincial Park

O.Reg. 123/62 — Amending Reg. 499 of
R.R.O. 1960

— General

O.Reg. 773/63 — Amending Reg. 498 of
R.R.O. 1960

— Addition of Galipo Lake and Upper
Redstone Lake to Algonquin
Provincial Park

The Public Lands Act

O.Reg. 84/62 — New

— Restricted Area — District of Coch-
rane — townships of O'Brien, Owens,
etc.

O.Reg. 85/62 — New

— Restricted Area — District of
Timiskaming — townships of Boston,
Lebel, etc.

O.Reg. 90/62 — New

— Restricted Area — District of
Thunder Bay (Mining Claims)

ORDERS - IN - COUNCIL

Recommended by the Minister of Lands and Forests

During the Year 1962-63

THE CONSERVATION AUTHORITIES ACT

Numbers of Orders-in-Council

1194/62;	1580/62;	2746/62;	4027/62;
1196/62;	1676/62;	2747/62;	4200/62;
1197/62;	1713/62;	2748/62;	254/63;
1198/62;	1720/62;	2752/62;	320/63;
1202/62;	1721/62;	2753/62;	342/63;
1325/62;	1830/62;	2755/62;	347/63;
1326/62;	1832/62;	2760/62;	481/63;
1336/62;	2040/62;	2761/62;	677/63;
1338/62;	2142/62;	2767/62;	752/63;
1344/62;	2196/62;	3158/62;	832/63;
1481/62;	2497/62;	3191/62;	
1492/62;	2598/62;	3970/62;	

THE CROWN TIMBER ACT

Numbers of Orders-in-Council

1132/62;	2338/62;	3412/62;	4120/62;
1211/62;	2345/62;	3413/62;	4201/62;
1226/62;	2346/62;	3414/62;	4202/62;
1229/62;	2403/62;	3415/62;	4219/62;
1303/62;	2498/62;	3417/62;	4220/62;
1362/62;	2499/62;	3419/62;	30/63;
1380/62;	2502/62;	3420/62;	63/63;
1392/62;	2503/62;	3421/62;	64/63;
1491/62;	2681/62;	3422/62;	81/63;
1561/62;	2684/62;	3423/62;	118/63;
1562/62;	2685/62;	3428/62;	249/63;
1563/62;	2686/62;	3429/62;	251/63;
1587/62;	2687/62;	3445/62;	252/63;
1626/62;	2688/62;	3483/62;	321/63;
1629/62;	2714/62;	3484/62;	322/63;
1694/62;	2850/62;	3485/62;	323/63;
1763/62;	2974/62;	3486/62;	398/63;
1764/62;	2975/62;	3573/62;	399/63;
1765/62;	2987/62;	3574/62;	400/63;
1867/62;	2988/62;	3626/62;	402/63;
1869/62;	2992/62;	3635/62;	403/63;
1870/62;	3023/62;	3639/62;	531/63;
2005/62;	3181/62;	3644/62;	538/63;
2085/62;	3185/62;	3647/62;	539/63;
2086/62;	3186/62;	3919/62;	547/63;
2089/62;	3187/62;	3920/62;	577/63;
2123/62;	3188/62;	3921/62;	589/63;
2124/62;	3189/62;	3922/62;	656/63;
2174/62;	3190/62;	3923/62;	754/63;
2187/62;	3235/62;	4028/62;	786/63;
2335/62;	3236/62;	4029/62;	787/63;
2336/62;	3410/62;	4030/62;	788/63;
2337/62;	3411/62;	4119/62;	

THE EXECUTIVE COUNCIL ACT

Numbers of Orders-in-Council

1352/62;	2208/62;	3758/62;	899/63;
2088/62;	2497/62;	14/63;	
2177/62;	3212/62;	221/63;	

THE GAME AND FISHERIES ACT

Numbers of Orders-in-Council

1848/62;	2821/62;	3192/62;	3416/62;
1849/62;	2989/62;	3237/62;	3537/62;
1883/62;	2996/62;	3255/62;	726/63;
2125/62;	2997/62;	3262/62;	753/63;
2680/62;	3182/62;	3380/62;	

THE LAKES AND RIVERS IMPROVEMENT ACT

Numbers of Orders-in-Council

1298/62;

THE LAKE OF THE WOODS CONTROL BOARD ACT

Numbers of Orders-in-Council

1934/62;

4203/62;

MISCELLANEOUS

Numbers of Orders-in-Council

2599/62;

3446/62;

3783/62;

THE MUNICIPAL ACT

Numbers of Orders-in-Council

2404/62;

2766/62;

2994/62;

3189/62;

THE PARKS ASSISTANCE ACT

Numbers of Orders-in-Council

1337/62;

2245/62;

2754/62;

658/63;

1831/62;

2246/62;

2831/62;

659/63;

2041/62;

2700/62;

2835/62;

831/63;

2044/62;

2707/62;

655/63;

2048/62;

2708/62;

657/63;

THE PROVINCIAL LAND TAX ACT, 1961-62

Numbers of Orders-in-Council

4195/62;

THE PROVINCIAL PARKS ACT

Numbers of Orders-in-Council

1480/62;

1693/62;

900/63;

THE PUBLIC LANDS ACT

Numbers of Orders-in-Council

1131/62;	2210/62;	3201/62;	4033/62;
1220/62;	2211/62;	3450/62;	34/63;
1223/62;	2214/62;	3451/62;	234/63;
1227/62;	2504/62;	3645/62;	250/63;
1297/62;	2600/62;	3651/62;	253/63;
1304/62;	2763/62;	3652/62;	471/63;
1305/62;	2774/62;	3832/62;	474/63;
1373/62;	2841/62;	3916/62;	537/63;
1403/62;	2851/62;	3924/62;	587/63;
1482/62;	2985/62;	3926/62;	751/63;
1483/62;	2986/62;	3927/62;	789/63;
1493/62;	2995/62;	3928/62;	859/63;
1630/62;	3013/62;	4031/62;	
2207/62;	3189/62;	4032/62;	

THE PUBLIC SERVICE ACT

Numbers of Orders-in-Council

1776/62;	2832/62;	4203/62;
1934/62;	4065/62;	

Total number of Orders-in-Council — 297

(Orders-in-Council passed under two statutes are shown in both lists).

FEDERAL - PROVINCIAL CO-OPERATIVE AGREEMENT

Forest Research

By an agreement dated the 31st day of January, 1963, between Her Majesty the Queen in right of Canada, as represented by the Minister of Forestry and Her Majesty the Queen in right of Ontario, as represented by the Minister of Lands and Forests and the Minister of Public Works, agreements between Canada and Ontario dated the 30th day of September, 1952 and the 29th day of January, 1959, were replaced and superseded as of the 31st day of March, 1963. Under the new agreement Ontario agreed to continue to provide for the use of Canada the Forest Insect Laboratory at Sault Ste. Marie and the Laboratory of Forest Pathology at the Southern Research Station of the Department of Lands and Forests for the purpose of conducting forest research studies. The agreement provides that no new buildings or extensions shall be provided for the purpose of the agreement without the approval of the appropriate provincial authorities and unless the monies are appropriated by the Legislature of the Province of Ontario.

Ontario agreed to provide heat and be responsible for the maintenance repairs of the buildings at the laboratories and to provide water required for sanitary and laboratory purposes at the Laboratory of Forest Pathology at the Southern Research Station. Canada agreed to provide all other services required for the operation of the laboratories. Canada also agreed to supply, instal, maintain and repair in the laboratories all equipment which in the opinion of Canada was necessary for the purposes of the agreement.

Canada agreed to conduct forest research studies and to give preference to

studies that are of interest to Ontario as recommended by an advisory committee and to supply and administer the staff required including the payment of salaries, expenses and costs relating to the employment and activities of such staff.

Canada agreed to make the results of the studies available to Ontario, to publish such results as Canada deems appropriate and to comply with any reasonable requests from Ontario for advice and assistance. Ontario agreed, where deemed advisable, to utilize the results therefrom and relieve Canada of any responsibility in respect of any steps taken by Ontario in implementing results of the studies or the advice or assistance.

The agreement provides for an advisory committee of ten members who hold office during pleasure. Five are appointed by the Minister of Forestry and five are appointed by the Minister of Lands and Forests. A quorum consists of the presiding officer, the chairman or vice-chairman, and six other members. In addition there must be at least three of the members appointed by Canada and three members appointed by Ontario. This committee shall meet annually. The agreement provides for the appointment of a chairman and vice-chairman and the calling and conduct of meetings. It also provides that it is the duty of the committee,

- (a) to receive reports of studies conducted by either party and the results obtained therefrom;
- (b) to make recommendations relating to further studies and publications;
- (c) to recommend pilot experiments and test procedures, in co-operation with the Department of Lands and Forests (Ontario), to supplement laboratory and field studies carried out under the agreement; and
- (d) to formulate recommendations respecting operating practices upon completion of experiments and tests.

The agreement is subject to review and revision as may be agreed upon and provides that the accommodation provided by Ontario shall remain the property of Ontario and all equipment supplied or installed by Canada shall be deemed not to become fixtures but to remain the property of Canada.



School children wait their turn to compete in the Lands and Forests poster contest at the Canadian National Exhibition in Toronto.



A staff photographer making motion pictures of beaver trapping in Kapuskasing Forest District.

OPERATIONS BRANCH

IN THE fiscal year under survey, Operations Branch was composed of four sections: Office Management Section, Central Supply Warehouse Section, Conservation Information Section and Conservation Education Section.

Office Management Section directs most of the purchasing for the Department, generally, including all pertinent aspects such as tenders, quotations, current catalogue prices and the study of ever-changing products. The Section is responsible for the inventory and control of office furniture and equipment, the condition of all office machines of the Department, the processing of all requisitions of stationery supplies for the Department, the control of supply and demand for uniforms, and the liaison required in the organization of conferences, meetings, etc.

Central Supply Warehouse Section is charged with the receipt and maintenance of stock, the keeping of stock records, and the supply of equipment.

Conservation Information Section issues weekly news and special press releases; operates a photograph, slide and cut service; handles a large volume of correspondence and personal enquiries on the use of renewable, natural resources; prepares special articles and background material for outside agencies; prepares and places both display and classified advertisements; maintains a reference library; and publishes more than 100 books, pamphlets and reports for Department use and general distribution.

Conservation Education Section is responsible for the production and management of Departmental displays and exhibits throughout the Province (including the Canadian National Exhibition); for poster contests for school children; for the production of motion picture films dealing with fire control, timber products, fish and wildlife resources and parks; for preparation and delivery of lectures or discussions in schools and camps; and for radio and television broadcasts.

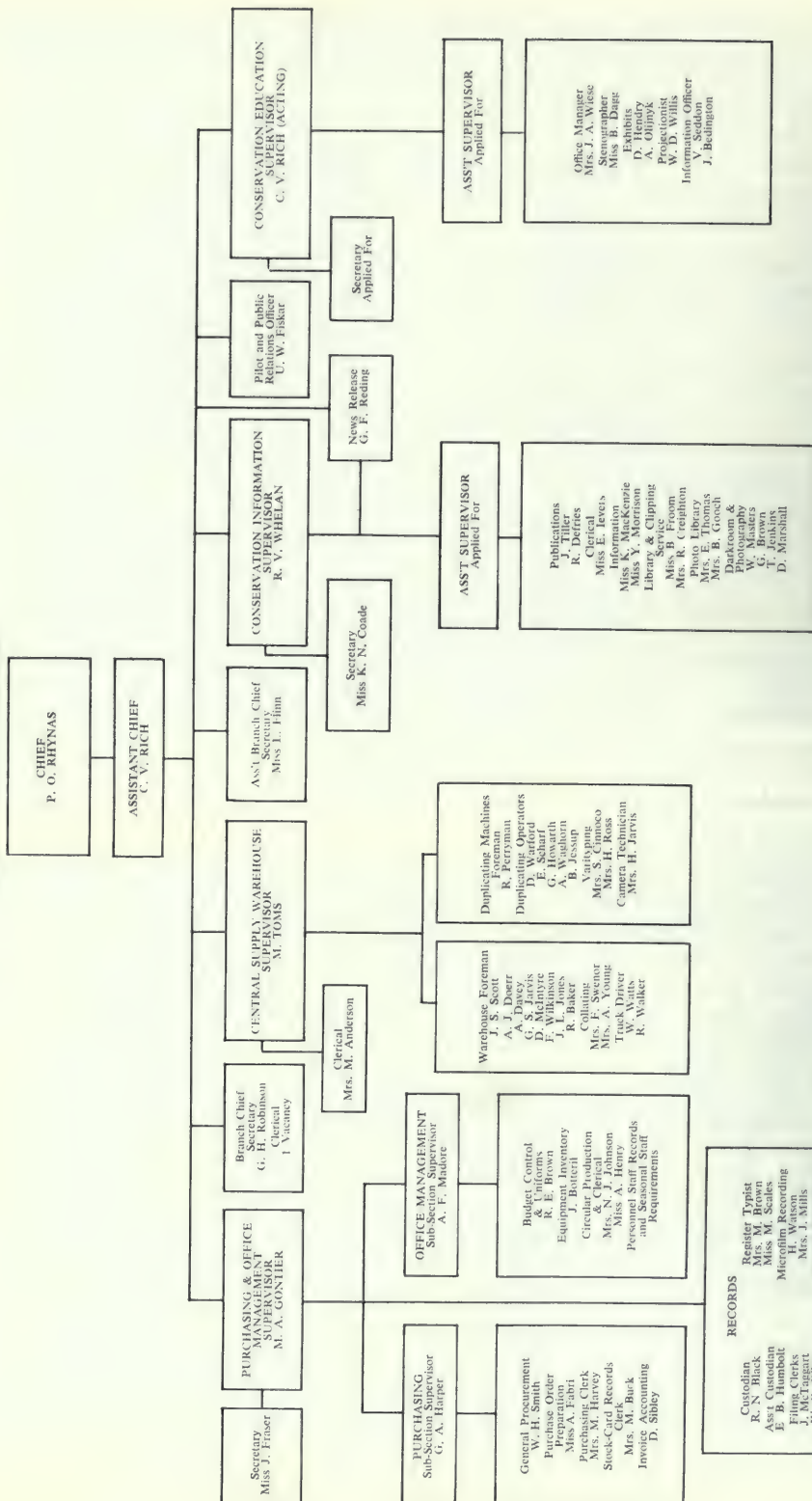
OFFICE MANAGEMENT SECTION

Purchasing Subsection

This Subsection, charged with the procurement of supplies and services for the Department throughout the Province, experienced a widespread activity, covering purchasing and its related aspects as well as other diversified duties. With the transfer of Conservation Authorities Branch to this Department early in 1962, and other internal changes, these activities were intensified.

In the period under review, there were received nine-thousand-odd requisitions for supplies and services, which were the basis for the issuance of 4,677 direct purchase orders, 1,924 Queen's Printer stationery orders, 455 Queen's Printer printing orders and 331 Public Works requisitions. In an analysis of work performed, the following activities were as prominently noted as heretofore:

OPERATIONS BRANCH



RECORDS

- Custodian
R. C. Galt
- Asst. Custodian
E. B. Humbolt
- Filing Clerks
J. C. Galt
W. C. Galt
C. E. Bullard
- Register Typist
Miss M. Stales
- Microfilm Recording
H. Watson
- Miss J. Mills
- Exposure Manager
Service Engineer
G. Wolsenholme

1. Receipt and recording of all requisitions from Head Office and Regional and District Offices, requiring decision as to what could be supplied from stock and what was to be ordered;
2. Quotation calls, opening of same in committee and recommendations;
3. Investigation and procurement procedures for all purchases, including also directions, preparation of direct purchase orders and requisitions to the Queen's Printer and the Department of Public Works, and expediting of same;
4. Maintenance of inventory control;
5. Liaison between this Department and the Department of Public Works for office and other space requirements throughout the Province and for which leases and rentals are arranged and other related matters attended to;
6. Supervision of telephone and lighting demands, moving and other internal and external office requirements;
7. Arrangements for accommodation, travel, conferences, etc;
8. Correspondence, preparation of reports; and
9. Special assignments.

Correspondence, telephone and interviewing are media which were employed extensively.

This Subsection was on the alert for new items and trends in office equipment and supplies and developments on existing ones. District and Head Offices were kept informed of these matters and their suppliers where it was deemed warranted, and descriptive sheets and catalogues were supplied to the aforementioned offices.

Office Management Subsection

Office Management Subsection was responsible for office services and the preparation of estimates which included equipment and supplies, stationery and office outfitting, travel, maintenance and operating, payrolls, uniforms, publications and public appeals.

1. *The inventory of all major equipment* in the Province belonging to the Department. This included trucks, cars, boats, canoes, power plants, shop equipment, tools, fire hose, outboard motors, office machines, etc. There were some 2,000 power units, including mobile, marine and stationary.
2. *Invoices* covering all purchases for Head Office and Field Offices were processed in this Subsection as to fair price, confirmation of proper item, and actual receipt of material. The invoices were then coded to proper vote and item and forwarded to Accounts Branch for processing and payment.
3. *Circulars and Bulletins*. All circulars and bulletins required by the Department were processed through this Section after they were approved by the Circular Board. This involved the cutting of stencils, the follow-up through the duplicating room, and distribution. All revisions of circulars and bulletins in effect in the Branch were carried through by this Section, including an annual review to publish a list of the circulars and bulletins to be retained in effect. This involved close study and checking with all other Branches as it might affect them.
4. *Uniforms*. There were approximately 1,500 approved personnel in uniform on the staff of this Department including seasonal Parks staff. A continuous record was kept of each individual's uniform account which was checked against requisitions for uniform items, and requisitions were approved according to scale of issue. Included in the estimates for the coming fiscal year must be an accurate estimate of funds required for the uniform programme.

5. *Records.* Records pertinent to all Crown Lands of the Province were controlled through the Records Office. Assembly, indexing and classifications of all incoming correspondence, compiling of new files and distribution to the offices in which officials required any particular files, were the main responsibilities of this office. An average of 425 files were sent out and returned daily. Every new letter pertaining to any of 308,000 files was recorded, sent to the pertinent offices for handling, and finally added to the proper file for record. During the current fiscal year, record files up to and including all plans and surveys to the end of 1917 were microfilmed.
6. *Boat Licensing.* This Subsection was responsible through the Federal Department of Transport for the processing of applications for licences for all Department boats. Some marine units of the Department required only a licence number, and others required registration showing home port, tonnage, dimensions, etc., depending on the specifications of the marine unit in question. Specifications of the boats supplied to this section were used to prepare the necessary applications for licences.
7. *Special Assignments.* Because of the nature of this work, there was almost a daily demand for services where immediate action and organization were required.

CENTRAL SUPPLY WAREHOUSE SECTION

The functions of this Section include:—

The receipt of stock and its housing and distribution for all branches, regions and districts;

The duplicating of various forms, letters, publications and reports, including the design or revision of new forms and reports;

The collating and distribution of bulletins, circulars, technical reports, acts, bills, weekly newsletter and other duplicated material; and

The receipt and shipment of Fish and Wildlife Licences and Park Vehicle Permits to a large distribution list including District Offices and all licence issuers throughout the Province.

UNIFORMS

The Department's uniform stockroom is located in this Section. A stock of replacement uniform apparel is carried, and issues are shipped to personnel as authorized by requisition.

STOCKROOM

In the course of the fiscal year (April 1, 1962 to March 31, 1963), supplies and equipment shipped by the Section amounted to 228 tons, 659 lbs. In the same period, the Section received a total of 298 tons, 1,746 lbs. In addition to internal supply to Department offices in the Toronto area, the Section shipped 34,382 parcels by express, freight, transport and mail.

DUPLICATING, COLLATING AND DISTRIBUTION

Work in this Subsection was more active and demanding than normal. The reproduction of forms, reports, booklets, letters, circulars and bulletins is continuously being revised; the volume increases approximately ten per cent each year. Distributing and collating were as follows:

Information Bulletins	64,490
Circulars	26,245
News Releases	114,400
Extract from Fishery Regulations	10,300
Lands Tax Act	16,134
Summary of Fishery Regulations	387,857
Fishery Regulations	31,210
Summary of Hunting Regulations	417,565
Land Tax Bills	40,500
Box Covers & Letter	140,287
Miscellaneous Distributions	193,535
Total —	1,442,523

LICENCE ISSUING

There were more than thirty types of hunting, angling, trapping, trap-line, guide, frog, dip-net, roll net, and bait fish licences issued to all licence issuers and District Offices throughout the Province.

The number of licences prepared and checked for mailing and express totalled 1,432,902; they were forwarded on 14,573 invoices to more than 2900 issuers.

In addition, 169,000 Provincial Park Annual Vehicle Entrance Permits, 452,600 Daily Permits, 379,250 Camp-Site Permits and 295,200 Fur Seals were distributed by this Subsection.

CONSERVATION INFORMATION SECTION

The Section disseminates information on the protection and management of the renewable, natural resources under the Department's administration. It works through many media to bring to as many people as possible a better understanding of Lands and Forests policies and conservation principles.

NEWS

The Lands and Forests news release is mailed every week to all newspapers and all radio and television stations in Ontario. Its circulation of 2,170 includes class magazines, outdoor writers, conservation groups and hunters' and anglers' clubs and associations. It delivers Department news and regulations and informed opinion in a form easily adapted by outside agencies. The use of news release material by outdoor writers and commentators in the United States contributes importantly to Ontario's tourist trade.

Professional and public service groups are concerned to secure public notice through the news release's advance listing of conventions and other events of interest to sportsmen, naturalists, conservationists and professions and industries which touch upon Lands and Forests administration.

News of more than normal urgency is carried by spot press releases which go directly to important news outlets.

CORRESPONDENCE

During the past fiscal year, the Section returned 30,300 answers by mail to persons requesting information on such subjects as hunting and fishing regulations, camping facilities, tourist accommodations, summer cottage properties, conservation, and the purchase and planting of forest tree seedlings. Many requests come

from students and teachers who asked for information of a scientific nature.

In addition, the Section answered numerous requests for information in person and over the telephone.

PHOTOGRAPHS

The Section loaned approximately 9,000 black-and-white prints to newspapers and magazines during the past fiscal year; it also loaned cuts to publishers and transparencies to lecturers.

The Section operates a darkroom and a photograph library which contains approximately 37,000 negatives and 3,700 colour transparencies. Standard 8" x 10" prints are supplied immediately or at short notice. Sets of slides or prints are supplied to illustrate lectures on fish, trees and shrubs.

APPEALS

Special appeals are prepared for news media to enlist public support of Lands and Forests programmes, principally in forest fire prevention and hunter safety.

Special material is prepared and distributed to schools with the approval of the Department of Education. A textbook cover, "Some Ontario Game Birds", was awarded Third Prize in the continent-wide competition concluded at the 1963 annual meeting of the American Association for Conservation Information.

During the past fiscal year, 150 advertisements were placed in 63 newspapers to call for tenders on timber cutting, etc.

EDITORIAL SERVICE

The concentration of conservation messages is increased by services performed for outside agencies. Articles are written on request for newspapers and magazines when the subject is related to some aspect of Lands and Forests operations. Background material is prepared on request for outside writers and commentators. Speech material is sometimes prepared for Department personnel who are invited to address meetings of sports clubs, conservation groups and service organizations.

LIBRARY

The Section's reference library contains copies of all Lands and Forests publications and a variety of books, periodicals and press clippings; it includes early reports and legislative journals dating from 1856.

Publications

Lands and Forests books, booklets, leaflets and folders cover many fields of interest to the general public and to special groups. As new material becomes available, new publications are issued and earlier releases are revised.

*In the following listing of Lands and Forests publications, * indicates publications issued during the 1962-63 fiscal year.*

CONSERVATION AUTHORITIES

Conservation Authorities Act

Conservation Reports

Conservation Authorities in Ontario

*Conservation Badges

FISH AND WILDLIFE

Sport Fishes of Ontario (Chart in Colour)	\$1.00
Guide's Manual	\$0.25
Fishing in Lake Simcoe	\$1.00
Ten Commandments of Gun Safety	
Why Hunter Safety Training?	
*The Ontario Fishery Regulations	
*Summary of the Ontario Fishery Regulations	
*Extract from the Ontario Fishery Regulations (Poster)	
*Summary of the Ontario Hunting Regulations	
*Summary of the Ontario Big Game Hunting Seasons	
*Summary of the Ontario Regulations which Apply to Trapping and Fur Dealing	
*Fishes of Ontario	\$2.50

FOREST PROTECTION

Forest Protection in Ontario	
Wings Over Ontario	
Operation: Survival in the Woods	
Early Days	
*The Forest Fires Prevention Act	
*Dutch Elm Disease in Ontario	

LANDS AND SURVEYS

List of Water Powers	\$0.75
List of Geographical Townships	\$0.50
A Second Look at Aerial Surveys	
Ontario Resources Atlas	\$1.00
Price List of Lithographed Maps and Plans	
Summer Resort Lands in Ontario	
*The Public Lands Act	

LAW

Complete Set of 21 Acts Administered by the Department (without binders)	\$5.00
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OPERATIONS

Meet the Wildlife of Ontario's Outdoors	\$0.35
Camping in the Muskoka Region	\$2.00
How to Survive in the Woods	
Dictionary of Terms	
The Birch Bark Canoe	
Brief Messages	
A Teacher's Guide to Forest Conservation	
Common Trees (spruce, white pine, jack pine, yellow birch, sugar maple)	
Common Birds (Bluebird, Black-capped Chickadee and White-throated Nuthatch, Flicker, Evening Grosbeak, Rose-breasted Grosbeak, Song Sparrow, White-throated Sparrow and Scarlet Tanager)	
Common Mammals (Beaver, Black Bear, Coyote, Red Fox, Muskrat, Otter, Cottontail Rabbit, Squirrels, Timber Wolf and Woodchuck)	
*Annual Report of the Minister of Lands and Forests	
Part I—Detailed	
Part II—Highlights	

*A Statistical Reference of Lands and Forests Administration	
*Administrative Branches Chart	
*List of Publications for Distribution	
*List of Natural Science Booklets and Their Source	
*Tower Jack	
*The Pointer Boat	
*Our Forest Lands and What We Get from Them (Cartoons)	
*Early Days in Haliburton	\$2.50

PARKS

Algonquin Story	\$2.50
Algonquin Provincial Park	
Quetico Provincial Park	
Canoe Routes — Algonquin	
Canoe Routes — Quetico	
Check List of Birds — Algonquin	
Check List of Birds — Rondeau	
Check List of Trees, Shrubs and Woody Vines — Algonquin	
Check List of Trees, Shrubs and Woody Vines — Rondeau	
Check List of Ferns, Fern Allies and Herbaceous Flowering Plants — Algonquin	
Check List of Ferns, Fern Allies and Herbaceous Flowering Plants — Rondeau	
Check List of Mammals — Algonquin	
Check List of Fishes, Amphibians and Reptiles — Algonquin	
A Guide to Anglers in Algonquin Park	
So You Want to Go Camping?	
Provincial Parks in Ontario (Can. Geog. Jour.)	
*Provincial Parks of Ontario (revised)	
*Reptiles of Algonquin Park	
*The Provincial Parks Act	

PERSONNEL

- *Ontario Forest Ranger School (Prospectus)
- *Ontario Forest Ranger School (Information Brochure)
- *Ontario Forest Ranger School Year Book

RESEARCH

The Glackmeyer Report of Multiple Land-Use Planning	\$4.00
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TIMBER

The Farm Woodlot	
Planning for Tree Planting	
Care and Planting of Forest Trees	
Forest Tree Planting	
The Forest Trees of Ontario	\$0.50
Hardwood Trees of Ontario	\$0.50
Fifty Years of Reforestation in Ontario	\$0.50
The G. Howard Ferguson Forest Station	
Orono Forest Station	
Midhurst Forest Station	
Johnny Acorn Says	
*Directory of Primary Wood-Using Industries for Ontario	

CONSERVATION EDUCATION SECTION

Conservation Education Section conducts an educational programme which consists of the type of appeals calculated to attract public interest and explain in easily understandable terms the need for the wise use of renewable, natural resources.

Visual Education

Head Office Film Library contains 260 titles, with two or more prints of many of the titles. All films are available for loan to Field Offices upon request. During the year, 1,300 films were shipped to Field Offices in answer to requests received. Each District has its own projector and it has access to Regional Film Libraries as well as Head Office Film Library.

This Section loaned 16mm motion picture projectors, 35mm projectors, screens and films to the Provincial Parks offering an interpretive programme to the public during the summer months.

16mm FILM

Several thousand feet of motion picture film are available and are being used by T.V. outlets throughout the Province. The Section started production of a new film illustrating forest protection. During the year, the following films were added to Head Office and Field Film Libraries:

- Butterflies, Beetles and Bugs
- Colour of Life (French)
- Creatures of the Forest
- Flower and the Hive
- High Arctic
- Introducing Insects
- Introduction to Forest Fire Behaviour
- Life in the Woodlot
- Morning on the Lievre
- Return of the Trees
- Shore and Water Birds
- Training of Crew Bosses
- Trout Stream
- Wings of the Wild

RADIO AND TELEVISION

Radio and television stations throughout the Province have been most generous in their donations of free time to the Department, and Districts regularly take advantage of these opportunities to reach the public. In addition to radio programmes, several Districts now conduct regular, live television broadcasts of their own. The Section also supplies Districts with films for use on television.

Exhibits

Visual conservation appeals are featured in the Department's exhibit at many of the shows and fairs in Ontario. The major exhibits handled through Head Office were as follows:

CANADIAN NATIONAL EXHIBITION, TORONTO

Many changes were made to our exhibit area this year in the Ontario Government Building. A working model of a large scale sawmill was a complete success. Other new displays were a very realistic forest fire scene, a portable setting of Snakes of Ontario, and a display of new and some very old survey equipment and maps. Other exhibits featured were Hunter Safety Training, Provincial Parks, native fish, animals and birds, and the Children's Poster Contest. A nature trail was arranged on the mound with cages containing birds and small animals; various species of trees were planted and these were identified by sign cards for the viewing public.

The Conservation Poster Contest for elementary school children from six to fourteen years of age was held again this year. A Grand Prize of \$100.00 was presented for the best poster. First, second and third prizes, in each of three age groups, in amounts of \$50.00, \$25.00 and \$15.00, were awarded. Thirty Honourable Mentions, ten in each age group, were presented with books.

CANADIAN NATIONAL SPORTSMEN'S SHOW, TORONTO

This year, our exhibit was enlarged by approximately eight hundred square feet and featured Ontario's game fish and wildlife, Forest Protection, Parks, Hunter Safety Training and small boat safety. The making of canoe paddles and axe handles by an Indian was also featured.

CENTRAL CANADA EXHIBITION, OTTAWA

A display of timber, methods of woodlot management and the uses of Ontario's woods were the features of the show. Also included were fish, animals and birds of Ontario and a Provincial Parks display.

ROYAL AGRICULTURAL WINTER FAIR, TORONTO

Our display theme was the growing of trees from seed, with a talk given by our Foresters explaining a tree from seed to sawmill. A display of live animals was included.

Full cooperation was given to District Offices participating in sportsmen's shows and agricultural fairs such as the Western Fair at London, the Sun Parlor Sports, Boat and Travel Show at Windsor, North Western Ontario Sportsmen's Show, International Ploughing Match and the Timmins Sportsmen's Show.

Lecture Tours

Officers of the Department keep in constant touch with the public through fish and game associations, schools, church groups, service clubs and youth organizations. Illustrated lectures are given on all aspects of the Department's work. The following table provides a summary of the public lectures delivered by Head Office and Field Staff during the fiscal year. A summary of lecture tours which were carried out by the Ontario Forestry Association during the same period are included in the Department's figures:

Region	District	School Meetings		Public Meetings		Total	
		No.	Attend.	No.	Attend.	No.	Attend.
Western	Fort Frances	5	129	58	4349	63	4478
	Kenora	33	2970	52	5196	85	8166
	Sioux Lookout	9	1891	19	699	28	2590
Mid-Western	Geraldton	3	176	41	4666	44	4842
	Port Arthur	15	594	80	7791	95	8385
Northern	Cochrane	80	8934	42	1396	122	10330
	Kapuskasing	29	4638	46	1575	75	6213
	Swastika	1	175	49	2015	50	2190
Central	Chapleau	8	1151	16	477	24	1628
	Gogama	15	614	23	335	38	949
	S.S. Marie	10	609	77	4101	87	4710
	Sudbury	8	550	34	2068	42	2618
	White River	12	1964	14	865	26	2829
South-Central	North Bay	47	5970	50	2471	97	8441
	Parry Sound	80	4959	105	10214	185	15173
South-Eastern	Kemptville	72	5307	154	11748	226	17055
	Lindsay	45	1914	135	12084	180	13998
	Pembroke	6	505	180	28044	186	28549
	Tweed	145	6592	148	9343	293	15935
South-Western	Lake Erie	35	2321	278	16025	313	18346
	Lake Huron	26	2059	234	10851	260	12910
	Lake Simcoe	87	6766	431	28704	518	35470
Ontario Forestry Association				374	46860	374	46860
TOTALS		771	60788	2640	211877	3411	272665



Campers enjoy motion pictures and lectures on natural history in amphitheatre at Lake of Two Rivers, Algonquin Provincial Park.



Boy Scouts begin a six-day canoe trip in Algonquin Provincial Park.

PARKS BRANCH

THE responsibilities and functions of Parks Branch are as follows: Provision, operation and maintenance of provincial parks as public recreational lands with facilities necessary for uses in keeping with the park environments;

Examination of potential park areas;

Submission of recommendations regarding potential and proposed provincial park areas to the Ontario Parks Integration Board;

Production of detailed master plans for provincial parks;

Development of provincial parks in accordance with the master plans;

Design and construction of provincial park structures and buildings;

Establishment, operation and maintenance of interpretive programmes and exhibits in provincial parks of natural and/or historical significance; and

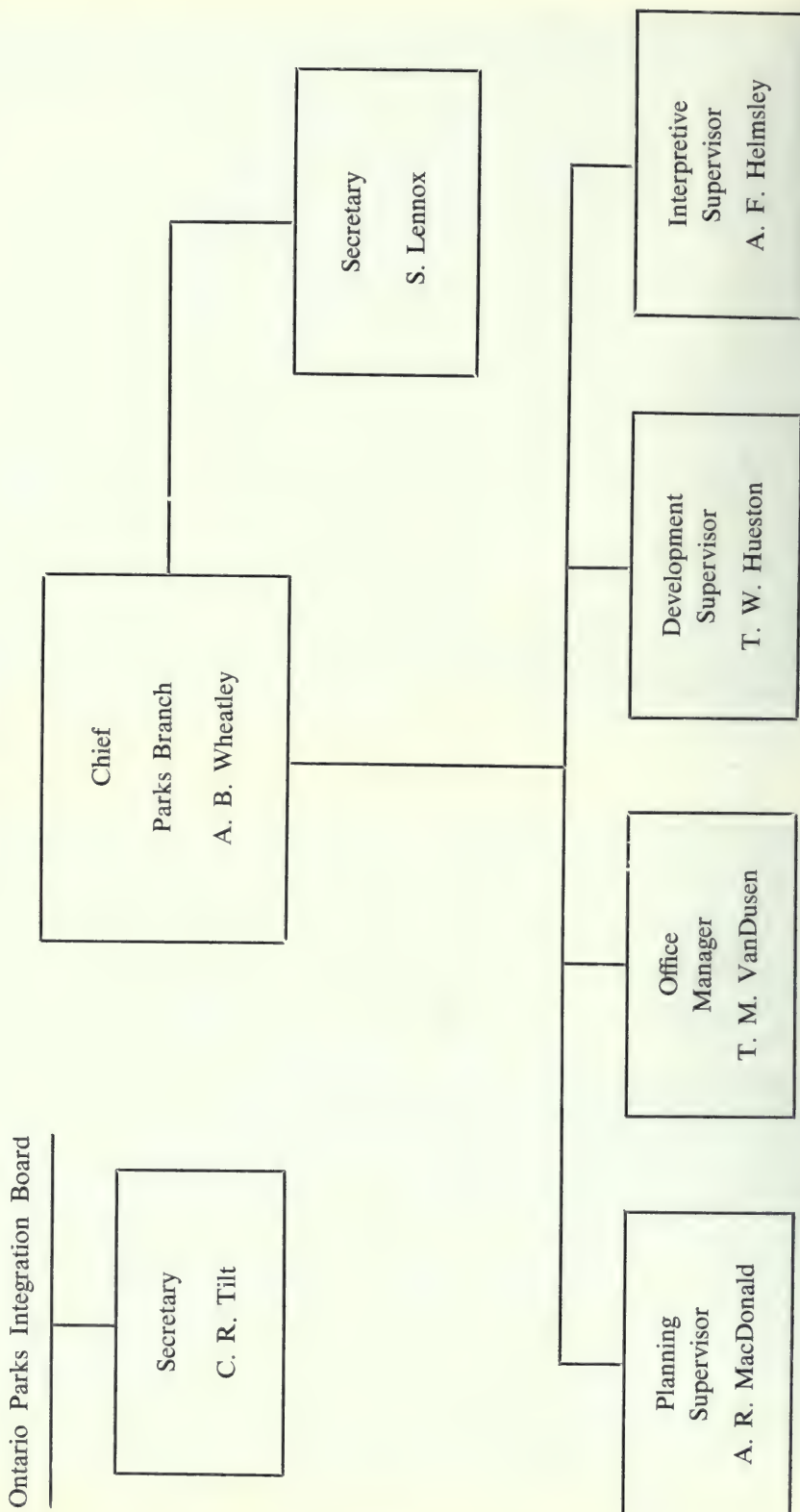
Collection, compilation and assessment of provincial park statistics.

In 1962, there were 81 provincial parks, totalling 3,481,158 acres, open for public use. Of these, five provincial parks were maintained without fees being charged. In addition, there were five provincial parks, consisting of 76,145 acres, under development and nine areas, totalling 114,083 acres, reserved for future provincial park development.

There were no changes in provincial park fees which consisted of the seasonal vehicle entry permit of \$3.00, the daily vehicle entry permit of fifty cents, the boat entry permit of \$5.00 for water entry into Quetico Provincial Park, and the daily campsite permit fee of \$1.00.

Again, an increase in park use was experienced in the 26% visitor increase to 7,820,944 and an increase in the numbers of campers of 23% to 1,063,127. Wilderness campers, using the interior waterways of Algonquin and Quetico Provincial Parks, totalled 46,753, a decrease which is attributed to adverse weather.

PARKS BRANCH



An appropriation of \$1,500,000.00 was made available for the purchase of land for park purposes and the development of existing park areas. The number of camping units was increased this year by 1,794, making a total of 14,319. In addition to these organized camp units, areas totalling 207 acres have been set aside for overnight and overflow campers. An additional 3,887 picnic tables were placed in the 1,864 acres of picnic area in provincial parks, making a total of 24,363 picnic tables available to accommodate picnickers. Additional building facilities included the construction of nine flush type comfort stations, 63 earth pit toilets and seven maintenance buildings. Through the facilities of the Department of Reform Institutions, an additional 2,990 fireplace grills and 150 barbecue grills were constructed for provincial park use.

Complete interpretive programmes of museums, conducted trips, illustrated lectures and labelled trails were continued in Algonquin, Rondeau, Sibley, Presqu'île and Quetico Provincial Parks. The Sibbald Memorial Museum in Sibbald Point Provincial Park was again in operation as was the Nancy Island Museum at Wasaga Beach Provincial Park. Labelled trails were continued in Remi Lake and Inverhuron Provincial Parks and one was opened in Kap-Kig-Iwan Provincial Park. A programme of conducted trips, illustrated talks and a labelled trail was continued in Pinery Provincial Park and a programme of conducted trips and evening film presentations was started in Lake Superior Provincial Park. New exhibit centres were established in Serpent Mounds and Inverhuron Provincial Parks to interpret the archaeological investigations held in these areas. These programmes and interpretive facilities, designed to familiarize visitors with the natural features and/or historical backgrounds of these provincial parks were used, this year, by 487,395 park visitors, an increase of 22% over last year's figure of 398,971.

In keeping with the multiple-use concept of land use and with full regard for park values and interests, hunting was continued in certain provincial parks. Waterfowl shooting, during the regular open season, was permitted in Rondeau, Presqu'île and Holiday Beach Provincial Parks on a seasonal permit basis of \$4.00 per hunter in each park. At Darlington Provincial Park, 15 blinds were available at a daily rental of \$2.00 with a limit of two hunters per blind and the number of shooting days to three per week. During the season, 839 gunners used seasonal permits, while 417 rented blinds to provide a total of 1,256 waterfowl gunners.

Pheasant shooting of stocked birds was continued in Sibbald Point, Darlington and Presqu'île Provincial Parks, with restrictions governing the shooting hours and the number of hunters. During the season, 730 gunners bagged 1,038 birds of 1,271 released in the three parks.

The hunting of deer, moose and bear in the Townships of Clyde and Bruton, Algonquin Provincial Park, was continued under a system of regulated hunting camp permits. During the season, 73 permits at \$20.00 each represented 534 hunters who took 191 deer, 24 moose and 20 bear. A zone was continued for daily hunters at no charge.

In Lake Superior Provincial Park, moose hunting was continued with the addition of a road checking system. This year, 370 park hunters took 34 moose.

Winter recreational facilities were again provided in three provincial parks. At Pinery Provincial Park, the installation of a ski lift proved very popular. The ski hill together with toboggan slides and skating rinks drew in excess of 6600 visitors. At Kakabeka Falls Provincial Park, toboggan slides and skating rink provided recreation for 26,410 visitors. At Darlington Provincial Park an estimated 12,000 visitors took advantage of three large skating rinks. Additional use was made of other provincial parks for winter activities, but no official count of visitors was made.

Table No. i

PROVINCIAL PARKS ESTABLISHED
(as of March 31, 1963)

Administrative District	Name of Park	Date Established
Lake Erie	Clay Creek	Sept. 29, 1958
	Holiday Beach	Oct. 6, 1958
	Ipperwash	June 24, 1938
	John E. Pearce	June 25, 1957
	Long Point	May 3, 1921
	Pinery	Oct. 11, 1957
	Rock Point	June 25, 1957
	Rondeau	May 5, 1894
	Turkey Point	April 21, 1959
Chapleau	Five Mile Lake	Sept. 29, 1958
Cochrane	Greenwater	June 25, 1957
	Kettle Lakes	June 25, 1957
Fort Frances	Caliper Lake	July 22, 1960
	Quetico	April 1, 1909
Geraldton	Klotz Lake	July 22, 1960
	Blacksand	July 22, 1960
Gogama	Ivanhoe Lake	June 25, 1957
Kapuskaing	Nagagamisis	June 25, 1957
	Remi Lake	June 25, 1957
Kemptville	Silver Lake	Sept. 29, 1958
	South Nation	July 22, 1960
Kenora	Aaron	Sept. 29, 1958
	Blue Lake	July 22, 1960
	Rushing River	Sept. 29, 1958
	Sioux Narrows	June 25, 1957
Lindsay	Darlington	Oct. 30, 1959
	Emily	June 25, 1957
	Mark S. Burnham	July 26, 1955
	Presqu'ile	May 18, 1922
	Serpent Mounds	June 25, 1957
Lake Simcoe	Bass Lake	June 25, 1957
	Sibbald Point	Dec. 23, 1957
	Six Mile Lake	Feb. 24, 1958
	Springwater	Sept. 29, 1958
	Wasaga Beach	Aug. 31, 1959
North Bay	Marten River	July 22, 1960
Parry Sound	Grundy Lake	April 21, 1959
	Sturgeon Bay	July 22, 1960
Pembroke	Algonquin	May 27, 1893
Port Arthur	Arrow Lake	June 25, 1957
	Inwood	Sept. 29, 1958
	Middle Falls	July 22, 1960
	Sibley	Jan. 13, 1944
Sault Ste. Marie	Lake Superior	Jan. 13, 1944
Sudbury	Fairbank	June 25, 1957
	Windy Lake	April 4, 1959
Swastika	Esker Lakes	June 25, 1957
	Kap-Kig-Iwan	June 25, 1957
Tweed	Black Lake	Sept. 29, 1958
	Lake on the Mountain	June 25, 1957

Table No. 2

PARKS IN OPERATION AND PENDING ESTABLISHMENT
(as of March 31, 1963)

Administrative District	Name of Park
Lake Erie -----	Port Bruce St. Williams
Fort Frances -----	Lake of the Woods
Geraldton -----	MacLeod Lake Neys Rainbow Falls
Lake Huron -----	Craigleith Inverhuron Sauble Falls
Kemptville -----	Fitzroy Rideau River
Lindsay -----	Balsam Lake
Lake Simcoe -----	Devils Glen Earl Rowe
North Bay -----	Antoine Finlayson Point Samuel de Champlain
Parry Sound -----	Killbear Point Mikisew Oastler Lake Restoule
Pembroke -----	Carson Lake Driftwood
Port Arthur -----	Kakabeka Falls
Sault Ste. Marie -----	Batchawana Bay Pancake Bay
Sioux Lookout -----	Ojibway Pakwash
Sudbury -----	Chutes Killarney
White River -----	Obatanga White Lake
Tweed -----	Bon Echo Lake St. Peter Outlet Sandbanks

Table No. 3

SALE OF VEHICLE PERMITS AND CAMPSITE PERMITS

Administrative District and Park Name	Vehicle Permits				Campsite Permits			
	1959	1960	1961	1962	1959	1960	1961	1962
Lake Erie								
Rondeau	27447	27282	30559	37389	5285	5686	6970	8230
Ipperwash	12210	11787	11291	12370	6165	5854	5441	5502
Long Point	2636	2574	6962	9712	4177	4113	5096	5495
Holiday Beach	8839	11788	12905	14286			198	377
Clay Creek	1095	1228	1496	1509	86	260	526	587
St. Williams	666	1120	1084	890				
Pinery	18899	18446	23537	26810	5275	9102	12646	15308
Rock Point			1137	1695			257	636
Turkey Point			994	1664			1369	2413
Chapleau								
Five Mile Lake			137	585			236	738
Cochrane								
Kettle Lakes	3471	3361	3087	3694	724	942	853	1146
Greenwater			498	491			351	501
Fort Frances								
Quetico	2168	2264	2570	2544	826	1178	1529	1546
Caliper Lake	1231	1555	1076	2383	1154	1435	1634	1651
Lake of the Woods		842	1174	1085		78	166	236
Geraldton								
Macleod Lake	1198	1279	985	1089	623	821	1015	1230
Rainbow Falls	281	274	2655	7272	162	311	7892	7883
Klotz Lake	261	199	152	171	907	901	660	654
Blacksand		277	942	1290		399	2161	2358
Gogama								
Ivanhoe		132	235	494		123	269	988
Lake Huron								
Craigleith	3486	3442	3832	4032	4083	3852	4140	4406
Sauble Falls	4814	4814	4844	5297	3389	3053	3297	3859
Inverhuron	5169	4961	5805	6453	2884	4437	5283	6260
Kapuskasing								
Remi Lake	1235	1408	1718	2007	603	778	875	1059
Nagagamisis			407	356			516	636
Kemptville								
Silver Lake	3496	4134	3883	4554	2624	3237	4017	4703
South Nation	4240	4937	4580	4180	1301	1373	1335	1599
Rideau River	6251	9344	9280	10672	2024	3111	3257	4210
Fitzroy			3509	4329			1853	2437
Kenora								
Aaron	795	1283	1626	1373	657	1043	2014	1798
Blue Lake	1002	1080	1057	2094	821	1235	1757	2212
Rushing River	3510	4354	2977	4858	2922	3105	3615	3376
Sioux Narrows	868	1454	626	1478	1171	1622	1492	1553
Lindsay								
Presqu'ile	16783	15284	16517	18968	7828	7864	8504	10127
Emily	5417	5702	6454	8443	1864	2649	3323	4759
Serpent Mounds	3792	4798	6115	7059	1700	3214	3904	3972
Darlington		4270	8817	10234		262	2006	3447
Lake Simcoe								
Bass Lake	7217	6926	7209	7890	4188	4568	5013	5611
Devils Glen	2754	2687	2496	2569	839	875	879	864
Sibbald Point	24214	24380	28307	31315	9351	9098	10566	12255
Springwater	13876	13572	13174	14421				
Earl Rowe		2409	2756	3142		908	1353	1440
Six Mile Lake		2640	3563	4360		2334	3533	3986
Wasaga Beach				26209				

Table No. 3 (Cont'd.)

SALE OF VEHICLE PERMITS AND CAMPSITE PERMITS

Administrative District and Park Name	Vehicle Permits				Campsite Permits			
	1959	1960	1961	1962	1959	1960	1961	1962
North Bay								
Finlayson Point	851	995	844	1412	1574	2003	2076	2422
Marten River	2249	1997	1929	2595	3731	2973	3633	4424
Antoine	856	1051	497	654	835	1236	640	560
Samuel de Champlain			2172	3410			1234	2148
Parry Sound								
Sturgeon Bay	1028	1321	1489	1271	2007	1726	2305	2016
Oastler Lake	4120	4007	4016	4585	4556	4208	4634	5063
Grundy Lake	1244	2264	3554	5331	2793	3544	5458	7851
Mikisew	793	1037	1297	1472	1036	1858	2089	2504
Killbear Point		1180	2004	3313		1891	4738	7059
Restoule				435				1056
Pembroke								
Algonquin	43991	48609	49430	55379	15759	17526	21040	25350
Carson Lake	149	205	583	449	1560	1213	1498	1415
Driftwood	1404	1470	1721	1973	1178	1554	1780	2127
Port Arthur								
Sibley	3262	1919	4693	4634	889	1090	3074	3448
Middle Falls	2886	2895	4091	4789	1164	1122	2642	2353
Shuniah	1809	1864	2389		801	1026	2985	
Kakabeka Falls	10898	13288	27605	30409	1081	1666	4088	5194
Inwood	304	508	1439	1742	550	652	1823	2446
Sault Ste. Marie								
Pancake Bay	1076	1230	4944	6502	1227	1405	6681	7270
Lake Superior		803	5816	5462		782	8069	7946
Sioux Lookout								
Ojibway				313				302
Pakwash				383				290
Sudbury								
Windy Lake	4219	3930	4089	4682	1165	921	861	948
Fairbank	1196	1700	1902	3108	1238	1987	3067	3416
Chutes				224				300
Swastika								
Esker Lakes	1156	1300	1393	1792	534	860	893	1065
Kap-Kig-Iwan	2195	1883	1559	1523	578	861	739	929
Tweed								
Black Lake	2183	2014	1793	2195	2067	1966	2017	2577
Lake St. Peter	936	883	780	798	1577	1217	1255	1427
Mazinaw	398	316			1045	934		
Outlet Beach	13838	13249	15227	18732	1777	2485	3684	6140
Bon Echo			2418	4046			2171	4488
Sandbanks				378				
White River								
White Lake				5936				7789
Other Offices	97		5	52				
TOTALS	292459	320205	392707	493695	124355	148527	216975	264371

Table No. 4

RECORD OF PARK USE

Administrative District and Park Name	Total Visitors				Total Campers			
	1959	1960	1961	1962	1959	1960	1961	1962
Lake Erie								
Rondeau	673439	693631	642020	686337	20320	24726	30703	36101
Ipperwash	232450	253346	187945	199494	25794	25398	23002	23873
Long Point	93046	112405	203121	178434	17168	17631	24388	23311
Holiday Beach	94697	154196	158843	155842			919	1515
Pinery	248220	371866	301665	329259	22109	37008	53551	64842
Clay Creek		29719	30393	39587	330	1022	2084	2189
St. Williams		38057	32981	19650				
Rock Point			12963	20759			1103	2721
Turkey Point			16457	342457			5610	10048
Lake Huron								
Sauble Falls	179766	141119	178298	166219	13074	11544	12981	15135
Craigleith	83369	58988	60396	70769	14488	13928	15180	16104
Inverhuron	106720	85550	97986	115860	11424	18247	21742	25636
Lake Simcoe								
Sibbald Point	316011	379901	325206	342168	35378	35535	42636	49762
Bass Lake	154127	139840	199991	166276	17749	18559	20423	23202
Devils Glen	47722	68805	81367	71110	2971	3149	3116	3158
Springwater	131984	113620	109686	98344				
Six Mile Lake		46758	80057	100841		8714	12878	15210
Earl Rowe		44366	60248	69707		3540	5298	5849
Wasaga Beach				518136				
Lindsay								
Presqu'ile	332196	299745	301487	311749	29385	29240	37307	41175
Emily	96300	102452	124360	169503	7252	10385	13986	19516
Serpent Mounds	76250	73963	104569	108848	6101	12125	15483	15999
Darlington		52681	122895	118860		1064	8111	13863
Mark S. Burnham		23900	29009	19011				
Tweed								
Black Lake	46059	32157	42727	51598	8350	8535	8537	10488
Lake St. Peter	32394	22173	29372	21253	6115	4778	4902	5768
Mazinaw Lake	9353	8967			4034	3651		
Outlet Beach	272047	160640	209112	281346	7464	14478	15504	26929
Bon Echo			39314	84610			8922	18714
Sandbanks				23197				
Kemptville								
Silver Lake	66644	81288	68082	91465	10355	13789	16569	19442
South Nation	61444	49734	42810	40343	4956	5347	5189	6148
Rideau River	80877	174255	144756	198945	7811	12379	14689	18068
Fitzroy			51328	58985			7364	9824
North Bay								
Antoine	38907	32951	22346	12872	3017	4480	2365	2051
Finlayson Point	35356	27584	40002	31426	5314	7992	7754	8649
Marten River	36780	59059	63225	71473	13746	11339	14024	17142
Samuel de Champlain			18102	40406			4897	8436
Parry Sound								
Sturgeon Bay	33300	27382	23751	23502	7238	6408	8377	7290
Grundy Lake	92569	71541	93303	157746	9700	13585	21898	31596
Oastler Lake	106071	145061	120057	132342	17195	16455	14956	19686
Mikisew	11814	20460	42904	37239	3970	7299	8421	10206
Killbear Point		43168	105675	157279		7712	18718	29543
Restoule				9937				4073
Pembroke								
Algonquin	451313	513568	466983	580392	59360	68823	77676	100841
Carson Lake	5477	4161	3107	6018	5477	4161	3578	5411
Driftwood	11736	10720	14791	15297	4487	6329	7317	8816

Table No. 4 (Cont'd.)

RECORD OF PARK USE

Administrative District and Park Name	Total Visitors				Total Campers			
	1959	1960	1961	1962	1959	1960	1961	1962
Sudbury								
Windy Lake	95995	84414	55696	82726	4805	3747	4222	4249
Fairbank	23307	33826	28384	38966	4983	7873	12290	13515
Chutes				1192				1179
Sault Ste. Marie								
Pancake Bay	32467	31489	69581	75737	5014	5543	26527	29128
Lake Superior		16086	46508	69296		3246	31170	30406
Chapleau								
Five Mile Lake			3713	7359			926	2758
Gogama								
Ivanhoe Lake		1337	2683	4038		472	998	3592
Swastika								
Esler Lakes	12739	23367	21072	26489	1772	3225	3312	4139
Kap-Kig-Iwan	27497	24135	30258	34116	2050	3079	2319	3303
Cochrane								
Kettle Lakes	63210	69716	50544	66223	2958	3632	3370	4448
Greenwater			6222	9961			1266	1808
Kapuskasing								
Remi Lake	33243	34871	25773	29452	2280	3128	3387	4036
Nagamagamis			14026	13539			1962	2412
Geraldton								
MacLeod Lake	25549	51953	16420	41706	2264	3060	3891	4836
Rainbow Falls			45815	85497	652	1203	28960	30150
Klotz Lake					3227	3391	2362	2367
Blacksand			14139	12085		1447	8211	8789
White River								
White Lake				41275				29881
Port Arthur								
Kakabeka Falls	120333	162703	279622	305585	4230	6805	16102	20637
Inwood	6274	9333	10208	13727	2061	2772	6847	9542
Shuniah	49500	43589	52461		2978	3860	10978	
Sibley	67695	33253	45070	31644	3717	4493	13836	13664
Middle Falls	133680	52958	55529	53570	4818	4563	9888	9039
Fort Frances								
Quetico	46493	56590	66531	37056	3265	3720	5749	5958
Caliper Lake	14047	27291	21832	30631	4489	5715	6254	6582
Lake of the Woods		16562	14665	10842		300	655	1007
Kenora								
Sioux Narrows	18369	31005	24676	36016	4261	6139	6284	5487
Blue Lake	17464	20186	24099	33376	3368	5034	6317	8937
Aaron	12620	23494	26173	33310	2555	4052	7681	7206
Rushing River	47433	74643	59980	48689	11190	12249	14637	13511
Sioux Lookout								
Ojibway								1157
Pakwash								1074
Provincial Totals	5106353	5692578	6215370	7820994	479069	592103	862559	1063127

Table No. 5A

PROVINCIAL PARKS IMPROVEMENTS (BUILDINGS)
(as of March 31, 1963)

District and Park	Park Offices	Entrance Control Booths	Camp- ground Offices	Residences	Summer Staff		Main- tenance Buildings	Concession Buildings	Change Houses	Comfort Stations	Earth Pit Toilets	Picnic Shelters	Museums
					Living Quarters	Change Houses							
Lake Erie													
Clay Creek	1									1	2	1	
Holiday Beach	1	1		1	1		1	1	8	4	6		
Ipperwash	1	1		1	1		1	1	4	6	2	2	
John E. Pearce													
Long Point	1	2		2	2		2	1	8	3	11		
Pinery	1	1	1	2	1		1	1	12	7	71		
Port Bruce									2		4		
Rock Point	1	1			3		2	4	4		6		
Rondeau	1	1	1	2			2	4	12	10	16	3	1
St. Williams											4		
Turkey Point	1	1		1			1	3	4		41		
Chapleau													
Five Mile Lake	1				1				2		32		
Cochrane													
Greenwater	1						1		2		14		
Kettle Lakes	1						1	1	4		37	1	
Fort Frances													
Caliper Lake			1	1			1		2	1	8	1	
Lake of the Woods		1		1			1		2		12		
Quetico	1	1		1	1			1	2	2	8	1	1
Geraldton													
Blacksand	1								2		21		
Klotz Lake	1										8		
MacLeod	1						1		2		20	1	
Neys											12		
Rainbow Falls	1						1		2		30		

Table No. 5A (Cont'd.)

PROVINCIAL PARKS IMPROVEMENTS (BUILDINGS)
(as of March 31, 1963)

District and Park	Park Offices	Entrance Control Booths	Camp- ground Offices	Residences	Summer Staff Living Quarters	Main- tenance Buildings	Concession Buildings	Change Houses	Comfort Stations	Earth Pit Toilets	Picnic Shelters	Museums
North Bay												
Antoine		1			3			2	1	16		
Finlayson Point										17		
Marten River	1		1		1	1		2	2	66		
Samuel de Champlain	1	1		1	1	1		6		40		
Parry Sound												
Grundy Lake	1			1				2		88	1	
Killbear Point	1			1				2		134		
Mikisew	1							2		28	1	
Oastler Lake	1							2	1	14	1	
Restoule								2		36		
Sturgeon Bay	1			1						16		
Pembroke												
Algonquin	1	5	8	11	22	1	3	4	7	168		2
Carson Lake			1		1					10		
Driftwood			1		1			1		18		
Port Arthur												
Inwood					1	2				12		
Kakabeka Falls	1	1				3	1	4	2	6		
Middle Falls	1	1			1			2	1	4	1	
Sibley	1	2	1		2	1		2		38	1	1

Table No. 58

PROVINCIAL PARKS IMPROVEMENTS (GENERAL DEVELOPMENT) (as of March 31, 1963)

District and Park	Swim. Beaches	Park Roads		Bridges	Camping Units	Organized Group			Picnic Areas		Parking Areas	Wells	Water Pressure Systems	Docks	Boat Launching Ramps	
		Internal Miles	Miles			Camp Acres	No. of Campers	Capacity Acres	Tables	Car Capacity						
Lake Erie																
Clay Creek		$\frac{3}{4}$			1	47			4	170	200		1	3	1	1
Holiday Beach	1700	$3\frac{1}{4}$				56			83	1776	886	5	5		1	1
Ipperwash	1600	$3\frac{1}{2}$			2	260			8	405	700				2	2
John E. Pearce		$\frac{3}{4}$							2	55	50	1				
Long Point	1600	10			2	360		12	16	105	2000	14	10		2	2
Pinery	24400	24	$\frac{1}{4}$			1075	19	400	20	1537	5100	60	16	1		
Port Bruce	1000								10	50	200					
Rock Point	400	1				47			10	121	235		1		2	2
Rondeau	18500	$23\frac{1}{2}$			1	506	4	200	10	1534	1500	45	17	1		
St. Williams		$\frac{1}{2}$							5	95	100	1			1	1
Turkey Point	900	9				303		3	6	1943	490	4				
Chapleau																
Five Mile Lake	600	$3\frac{1}{2}$				87			6	195	60	8		2	1	1
Cochrane																
Greenwater	600	5		4	20	1	50	10	15	165	100	4		2		
Kettle Lakes	4000	14			95	1	50	5	35	670	400	14	1	7	3	3
Fort Frances																
Caliper Lake	330	$1\frac{1}{2}$		1	86				5	35	60	1	1	1	1	1
Lake of the Woods	1500	$2\frac{1}{2}$		4	86				6	79	200	6	1	1	1	1
Quetico	805	$3\frac{1}{2}$		$\frac{1}{2}$	120				5	105	460	3	1	1		
Geraldton																
Blacksand	3250	$2\frac{1}{4}$		3	4	150	1	1	6	30	100	6			1	1
Klotz Lake		$1\frac{1}{4}$				30			1	8		2		1		
MacLeod	4240	2				54	1	30	5	75	324	7		3	2	2
Ney's	5280	3				33				10						
Rainbow Falls	300	$4\frac{1}{2}$			1	175	1	20	4	5	12	8		1	1	2

Table No. 5B (Cont'd.)

PROVINCIAL PARKS IMPROVEMENTS (GENERAL DEVELOPMENT)
(as of March 31, 1963)

District and Park	Swim. Beaches	Park Roads		Bridges	Camping		Organized Group			Picnic Areas		Parking Areas		Water Pressure Systems	Docks	Boat Launching Ramps
		Internal Miles	Access Miles		Units	No. of Acres	Camp Areas Campers	Overflow Camp Acres	Acres	Tables	Car Capacity	Wells				
North Bay																
Antoine		1				29				13	48	50		5	1	1
Finlayson Point	216	4½				114				4½	41	95	7	1	1	1
Marten River	1000	11		1		237	1	20		6	354	160	10	4	2	4
Samuel de Champlain	1000	11				149	2	60		15	551	450	12	1		5
Parry Sound																
Grundy Lake	1650	15½	1½	2	3	389	3	90	2	6	260	500	15	4	5	5
Kilbear Point	14000	18	6		3	575		90	5	30	222	225	18	3	5	3
Mikisew	1500	3	1			120				10	60	226	7	1	2	1
Oastler Lake	600	1¼				120				2	60	215	1	2	2	1
Restoule	4000	6¼	6	1		258				12	33	155	6	2	2	2
Sturgeon Bay	150	1				80				¼	20	20	2	2	2	1
Pembroke																
Algonquin	3500	125			2	1298		550	20	7	350	1350	40	5	25	3
Carson Lake	300	1				44				1	5	20	1			
Driftwood	3000	3				82				2	30	100	7	1		1
Port Arthur																
Inwood	50	1				42			3	2	31	70	6			
Kakabeka Falls	1800	4		1	1	69	1	50		32	331	690	2	1		
Middle Falls		1			1	30	1	50	1	6	126	300	2	1		
Sibley	2000	42		2	2	350	2	100	5	25	255	1000	14		2	2

[illegible]

Table No. 5C

PROVINCIAL PARKS IMPROVEMENTS (MISCELLANEOUS)
(as of March 31, 1963)

District and Park	Nature Trails (Miles)	Walking and Hiking Trails (Miles)	Canoe Routes (Miles)	Outdoor Exhibit Centres	Amphi- theatres	Skating Rinks	Toboggan Slides	Ski Hills With Tows	Ski Hills Without Tows	Hydro Lines Miles
Lake Erie										1/4
Holiday Beach										1/2
Upperwash					1					1 1/4
Long Point					1					12 1/4
Pinery	1	2	3		1	1	5	1	1	10 1/2
Rondeau	5				1					
Cochrane										
Greenwater		5								1/4
Kettle Lakes	1 1/2	4			1					
Fort Frances										
Caliper Lake										1 1/2
Quetico	5 1/2		900		1					1 1/2
Geraldton										
Blacksand		7								
Rainbow Falls		2								
Gogama										
Ivanhoe Lake		1								
Lake Huron										
Craigleith				1						1/4
Inverhuron	1 3/4			1	1					2 1/2
Sauble Falls			4							3/4
Kapuskasing										
Remi Lake	1 1/2									1 1/2
Kemptville										
Fitzroy										3/4
Rideau River										1 1/2
Silver Lake										1/4

Table No. 5C (Cont'd.)

PROVINCIAL PARKS IMPROVEMENTS (MISCELLANEOUS)
(as of March 31, 1963)

District and Park	Nature Trails (Miles)	Walking and Hiking Trails (Miles)	Canoe Routes (Miles)	Outdoor Exhibit Centres	Amphi- theatres	Skating Rinks	Toboggan Slides	Ski Hills With Tows	Ski Hills Without Tows	Hydro Lines Miles
Sudbury										
Fairbank		1 1/2			1					2
Windy Lake										
Swastika										
Esker Lakes		5	8	1	1					1/4
Kap-Kig-Iwan	1/2	2		1	1					
Tweed										
Black Lake					1					
Bon Echo		2								1 1/2
Lake on the Mountain										1/4
Lake St. Peter	2				1					1/4
Outlet Beach										2
Sandbanks										1/4
TOTAL	39 3/4	76 1/4	1718	5	26	2	10	1	1	53 1/2

Table No. 6

PARKS MISCELLANEOUS REVENUE IN YEAR ENDING MARCH 31, 1963

District	Park	Daily Vehicle Permits	Annual Vehicle Permits	Campsite Permits	Miscellaneous	Total
Aylmer	Clay Creek	\$ 585.50	\$ 1,014.00	\$ 992.00	\$ 22.25	\$ 2,613.75
	Holiday Beach	6,448.00	4,170.00	454.00	20.82	11,092.82
	Ipperwash	4,920.00	7,590.00	21,675.00	128.48	34,313.48
	Long Point	3,541.50	7,887.00	14,045.50	47.76	25,521.76
	Pinery	10,010.00	20,370.00	39,776.00	3,768.91	73,924.91
	Rock Point	728.50	714.00	875.00		2,317.50
	Rondeau	15,183.50	21,066.00	24,559.00	1,939.67	62,748.17
	St. Williams	408.50	219.00			627.50
	Turkey Point	463.00	2,214.00	5,064.00		7,741.00
	Five Mile Lake	231.50	366.00	1,402.00		1,999.50
Chapleau	Greenwater	196.00	297.00	674.50		1,167.50
	Kettle Lakes	1,380.50	2,799.00	1,935.50	.05	6,115.05
Fort Frances	Caliper Lake	966.50	1,350.00	2,588.00	5.31	4,909.81
	Lake of the Woods	460.50	492.00	413.00		1,365.50
	Quetico	761.50	3,063.00	3,557.00	14,259.00	21,640.50
Geraldton	Blacksand	553.00	552.00	3,101.00		4,206.00
	Klotz Lake	56.50	174.00	956.00		1,186.50
	MacLeod Lake	277.00	1,605.00	2,150.00		4,032.00
	Rainbow Falls	3,370.00	1,596.00	8,361.00		13,327.00
Gogama	Ivanhoe Lake	152.00	570.00	2,131.50		2,853.50
Hespeler	Craigleith	1,310.00	4,236.00	8,119.00		13,665.00
	Inverhuron	2,117.00	6,657.00	13,717.00		22,491.00
	Sauble Falls	1,951.00	4,185.00	8,677.00		14,813.00
	Nagamamis	88.00	540.00	1,747.00		2,375.00
Kapuskasing	Remi Lake	704.50	1,794.00	1,712.50		4,211.00
Kemptville	Fitzroy	1,560.50	3,624.00	3,755.00		8,939.50
	Rideau River	4,234.50	6,609.00	8,733.00	9.95	19,586.45
	Silver Lake	1,544.50	4,395.00	10,706.00		16,645.50
	South Nation	1,866.00	1,344.00	1,826.00	14.00	5,050.00

Table No. 6 (Cont'd.)

PARKS MISCELLANEOUS REVENUE IN YEAR ENDING MARCH 31, 1963

District	Park	Daily Vehicle Permits	Annual Vehicle Permits	Campsite Permits	Miscellaneous	Total
Kenora	Aaron	504.00	1,095.00	2,163.00		3,762.00
	Blue Lake	764.00	1,698.00	4,150.00		6,612.00
	Rushing River	2,092.00	2,022.00	5,606.00		9,720.00
	Sioux Narrows	575.00	984.00	2,837.00		4,396.00
Lindsay	Darlington	4,067.00	6,300.00	4,800.00	86.84	15,253.84
	Emily	3,017.50	7,224.00	9,933.00		20,174.50
	Presqu'ile	7,071.00	14,478.00	19,637.50	91.42	41,277.92
	Serpent Mounds	2,496.50	6,198.00	7,785.00		16,479.50
Maple	Bass Lake	2,565.00	8,280.00	11,187.00		22,032.00
	Devils Glen	942.50	2,052.00	1,296.00	3.79	4,294.29
	Earl Rowe	1,112.50	2,751.00	2,638.00	55.85	6,557.35
	Sibbald Point	12,394.50	19,578.00	27,158.00	87.07	59,217.57
	Six Mile Lake	1,404.00	4,656.00	7,121.00		13,181.00
	Springwater	6,141.00	6,417.00			12,558.00
	Wasaga Beach	11,951.50	6,918.00		2,155.40	21,024.90
North Bay	Antoine	256.50	423.00	899.00		1,578.50
	Finlayson Point	405.00	1,806.00	5,878.00		8,089.00
	Marten River	766.00	3,189.00	10,103.00	18.20	14,076.20
	Samuel de Champlain	1,413.00	1,752.00	3,364.00	1.25	6,530.25
Parry Sound	Grundy Lake	1,877.00	4,731.00	16,088.00		22,696.00
	Killbear Point	824.00	4,997.00	20,051.00	18.35	25,890.35
	Mikisew	463.00	1,638.00	5,231.00	15.18	7,347.18
	Oastler Lake	1,566.00	4,359.00	9,661.00		15,586.00
	Restoule	119.50	588.00	2,461.50		3,169.00
	Sturgeon Bay	358.00	1,665.00	4,701.00		6,724.00
Pembroke	Algonquin	22,165.50	33,144.00	57,338.00	5,043.50	117,691.00
	Carson Lake	93.00	789.00	2,735.00		3,617.00
	Driftwood	733.00	1,521.00	4,086.00		6,340.00

Port Arthur	District Office	746.50	108.00			108.00
	Inwood		747.00	2,492.00		3,985.50
	Kakabeka Falls	13,848.50	8,136.00	5,993.00		27,977.50
	Middle Falls	2,031.00	2,181.00	2,546.00		6,758.00
Sault Ste. Marie	Sibley	1,828.50	2,931.00	5,048.00	205.00	10,012.50
	Lake Superior	2,054.50	4,059.00	9,599.00		15,712.50
	Pancake Bay	2,586.00	3,990.00	10,188.00		16,764.00
Sioux Lookout	Ojibway	129.00	165.00	664.00		958.00
	Pakwash	131.00	363.00	841.00		1,335.00
Sudbury	Chutes	95.00	102.00	305.50		502.50
	Fairbank	1,227.50	1,959.00	4,627.00	3,200.00	11,013.50
	Windy Lake	1,877.50	2,781.00	2,150.00		6,808.50
Swastika	Esker Lakes	655.50	1,443.00	2,457.00		4,555.50
	Kap-Kig-Iwan	576.50	1,110.00	1,152.00		2,838.50
Tweed	District Office		3.00			3.00
	Black Lake	718.50	2,274.00	5,747.00		8,739.50
	Bon Echo	1,337.00	4,116.00	11,100.00		16,553.00
	Lake St. Peter	219.00	1,080.00	3,129.00		4,428.00
	Outlet Beach	7,073.50	13,755.00	16,229.00	35.59	37,093.09
	Sandbanks	150.00	234.00			384.00
White River	White Lake	2,562.00	2,436.00	11,072.00		16,070.00
Head Office			45.00			45.00
Sub-Total						1,080,000.64
Park Concessions						71,646.31
Total						1,151,646.95



A view in Greenwater Provincial Park, Cochrane Forest District.

Table No. 6A

The Miscellaneous Column of Table No. 6 includes revenue from the following sources:

1. Hunting Permits	\$ 20.00
2. Boat Parking (Quetico)	260.00
3. Sale of Fuelwood	428.50
4. Sale of Ice	10,336.01
5. Sale of Hydro	222.37
6. Pay Telephone Commission	170.43
7. Sale of Buildings	5,386.15
8. Sale of Sanitary Supplies	19.45
9. Court Awards	80.00
10. Boat Permits (Quetico)	9,655.00
11. Guide Licenses (Quetico)	4,344.00
12. Other	311.73
Total	\$31,233.64

Table No. 7

**SUMMARY OF ATTENDANCE FOR INTERPRETIVE AND NATURALIST
PROGRAMMES (YEAR ENDING MARCH 31, 1963)**

Algonquin Provincial Park		Attendance
Museum Attendance (estimated)	133 days	179,191
Pioneer Logging Exhibit (estimated)	103 days	66,100
Conducted Trips	57 trips	4,342
Labelled Trail Registration	3 trails	40,590
Evening Programmes of Lectures	18	3,109
Outdoor Amphitheatre Programmes	38	16,702
Special Groups	44	3,099
Total		313,133
Rondeau Provincial Park		
Museum Registration	87 days	28,561
Conducted Trips	63 trips	1,166
Outdoor Amphitheatre Programmes	15 programmes	2,716
Special Group Lectures	12 lectures	595
Total		33,038
Sibley Provincial Park		
Museum Attendance (estimated)	77 days	26,700
Conducted Trips	43 trips	808
Labelled Trail Registration	3 trails	520
Outdoor Amphitheatre Programmes	21	3,875
Total		31,903
Quetico Provincial Park		
Museum Registration	79 days	7,012
Conducted Trips	22 trips	332
Labelled Trail Registration	3 trails	1,218
Outdoor Amphitheatre Programmes	18 programmes	1,661
Total		10,223
Presqu'île Provincial Park		
Museum Registration	79 days	23,738
Conducted Trips	36 trips	1,297
Labelled Trail Registration	2 trails	4,641
Outdoor Amphitheatre Programmes	21 programmes	6,782
Total		36,458
Pinery Provincial Park		
Conducted Trips	46 trips	1,256
Outdoor Amphitheatre Programmes	16 programmes	6,975
Total		8,231
Sibbald Point Provincial Park		
Museum Registration	80 days	21,516
Wasaga Beach Provincial Park		
Nancy Island Museum Registration	91 days	21,657
Lake Superior Provincial Park		
Conducted Trips	30 trips	427
Outdoor Amphitheatre Programmes	14 programmes	2,225
Total		2,652
Inverhuron Provincial Park		
Labelled Trail Attendance (estimated)	1 trail	7,000
Remi Lake Provincial Park		
Labelled Trail Registration	1 trail	84
Kap-Kig-Iwan Provincial Park		
Labelled Trail Attendance (estimated)	1 trail	1,500

Table No. 8

INTERPRETIVE PROGRAMMES

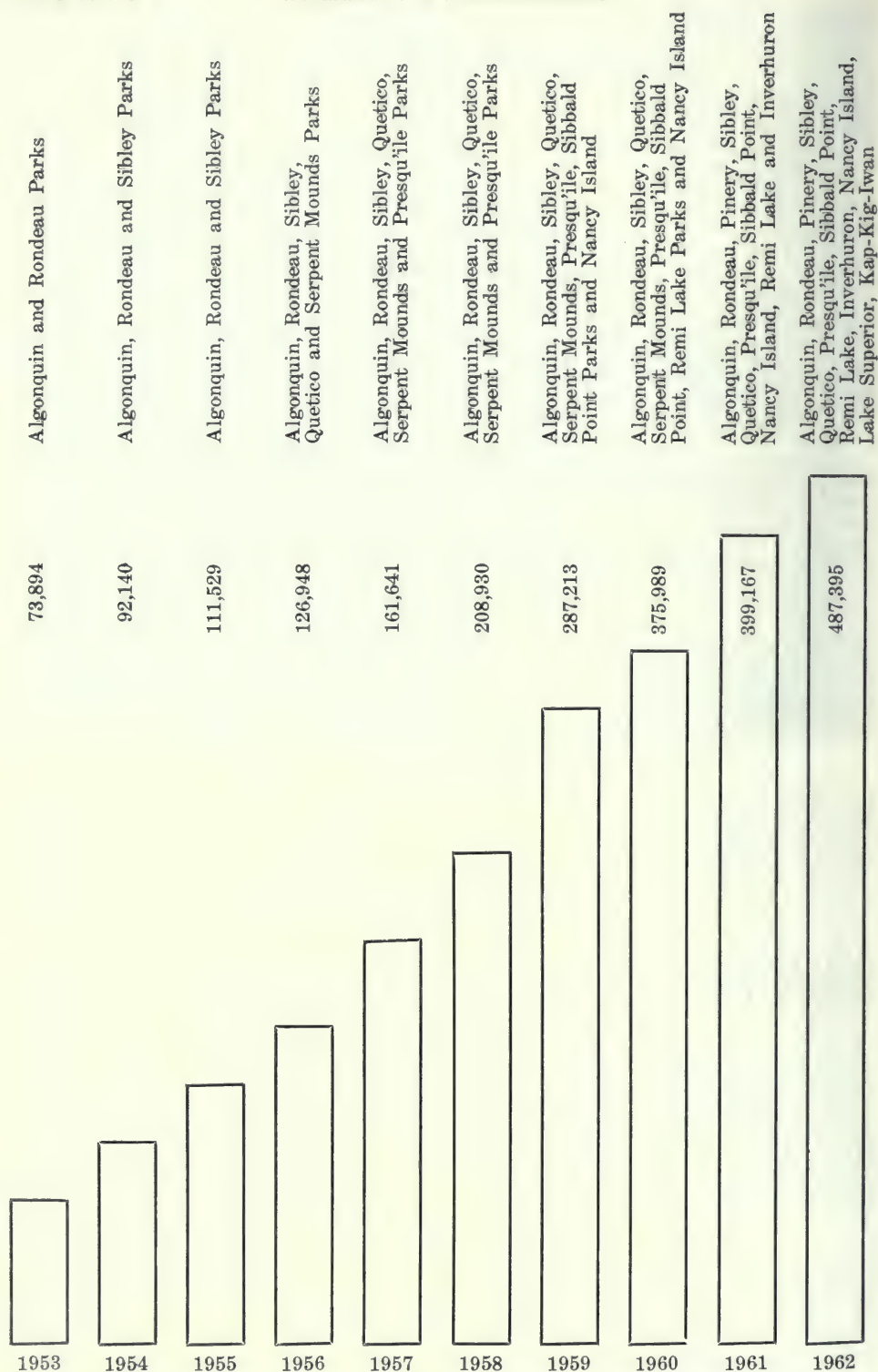


Diagram showing the increase in Interpretive Programme Attendance of Museums, Labelled Trails, Conducted Trips and Lectures

Table No. 9

YEARLY ATTENDANCE OF PROVINCIAL PARK MUSEUMS
LABELLED TRAILS, CONDUCTED TRIPS AND LECTURES

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Algonquin Park	4178	6772	7885	1480	7766	8065	17496	71046	93410	99917	106946	126946	156570	196386	264357	268310	313133
Rondeau Park		903					814	2822	6953	7104	8527	13843	25780	34245	31537	30306	33038
Sibley Park									2474	4525	5434	5862	9504	11431	10500	18907	31903
Quetico Park											531	4360	5663	6247	10639	10425	10223
Serpent Mounds Park											5661	7986	8100	5454	3675		
Presqu'île Park												2689	3313	12154	23552	28332	36458
Sibbald Point Park													12123	21571	23421	23421	21516
Nancy Island (Wasaga Beach Park)													9173	9998	13652	13652	21657
Remi Lake Park															160	96	84
Inverhuron Park																1600	7000
Pinery Park																4118	8231
Lake Superior Park																	2652
Kap-Kig-Iwan																	1500
	4178	7675	7885	1480	7766	8065	18310	73868	102837	111546	127099	161686	208930	287213	375989	399167	487395



Practical instruction on progressive fire line construction at Ontario Forest Ranger School.



Junior Forest Rangers assist in building a towerman's cabin.

PERSONNEL BRANCH

THE job evaluation system and the older method of position classification are growing together with an increasing emphasis on the integration of the two systems. The use of point rating, as developed during the inception of the Job Evaluation Programme, is now being used as a comparative factor when classifying positions. The salary analysis of the clerical and office family jobs has been completed and it is anticipated that the final results in the form of new class and salary structures will be published in the summer of 1963. The staff of the classification unit has been enlarged by the appointment of two additional job analysts. This increase in staff has resulted in expanded services in position specification writing and the study of classification problems, particularly in the field organization. The programme of field visits has been enlarged, with the job analysts travelling to the districts to assist with the writing of technical and professional positions. Through the joint co-operation of the Civil Service Commission and the Classification Unit, there has been an effective drive to accelerate the work of classifying positions and to cut down the length of time required in reclassifications.

The Civil Service Commission requested and were given the services of the classification unit on several occasions to assist them by undertaking the preliminary instruction and training of job analysts who were later assigned to this and other departments.

There is continuing evidence that the ideas introduced by the Job Evaluation Programme are bringing results in the form of better job descriptions and more equitable classifications and salaries. The classification unit has proceeded with the writing of position specifications for the "second phase" technical and professional jobs, such as Chief Rangers, Parks Supervisors and Conservation Officers, throughout the Department. The writing of these positions partially reflects an anticipation of the demands which will be placed on this Department when the "second phase" begins. Also, the classification unit is continuing to make studies of the classification and salary structures of the technical field positions with particular emphasis on the Forest Ranger, Conservation Officer and related classification series.

A special review of the technical field personnel has been initiated with the goal of revising the salaries and classes to represent changing conditions in organi-

zation, technology and job content. The results of this study will be completed and submitted to the Commission by the summer of 1963.

It has been, and continues to be, the purpose of this unit to anticipate and plan for future classification needs, to improve communications and to provide information to the Field and Head Office. It is hoped this will result in a "feed-back" of ideas and suggestions. Such interchange is vital if future growth and progress is to be sustained.

RECRUITMENT

The recruitment programme was continued and appointments were made to fill vacancies at various levels resulting from retirements, superannuations, resignations, deaths, dismissals and addition of new positions.

During the winter of 1962/63 an unusually large number of enquiries about employment were dealt with by this section.

JUNIOR FOREST RANGER PROGRAMME

The Junior Forest Ranger programme grows in popularity each year. There were 680 students appointed to 54 camps in 16 districts of the province. These camps were operated from July 2nd to August 25th. The cost to operate the programme this year was \$350,570., which includes wages, travel, maintenance and provisions.

TRANSFERS AND PROMOTIONS

Job advertising continued to be used in the selection of personnel to fill vacancies occurring in 9 classifications and was used on several other occasions when requested by field or branch supervisors. Employees are informed of the selection as well as the number of applications.

TRAINING

Fifty-two forest rangers and conservation officers were selected to attend the Diploma Course at the Ontario Forest Ranger School and 24 to attend the Fish and Wildlife certificate course. Work was begun on the proposed Timber Management certificate course and background material was sought in order to institute a proposed Parks course.

On-the-job training continued in the districts supplemented by the field Forest Protection courses.

First Aid and Safety courses were held in the districts.

Several courses of the University extension type were sponsored wholly or in part by the Department and the Department sponsored Public Administration courses at University of Toronto and Ryerson continued into their second year.

Three foresters and two biologists attended the Resource Management course at University of Toronto and seven employees were granted educational leave to do postgraduate work at various universities.

The second draft of the Department training plan was completed. A Familiarization course was held in Toronto for foresters and biologists recently on staff.

SAFETY TRAINING

The Injury Frequency Rate for the fiscal year 1962-63 was 14.2, a decrease of 4.9 from the previous fiscal year.

The Injury Frequency Rate is a unit of measure to determine the frequency of disabling injury by the following formula:

$$\frac{\text{No. of lost time injuries} \times 100,000 \text{ man-days}}{\text{man-days worked}}$$

A comparison of Injury Frequency Rates for the past three fiscal years shows marked improvement in the frequency of injuries requiring more than four calendar days' absence from work. These are compensable injuries coming within the terms of the Workmen's Compensation Act.

1960-61	21.0
1961-62	19.1
1962-63	14.2

Each year more employees are being trained in the Lateiner Method of Accident Control. In 1962 five members of staff attended a course in the Lateiner Method of Accident Control at the supervisory level. There are now seven members of staff trained to teach safety methods and accident control.

A Department Safety Award was established for competition among the districts, and competition was scheduled to commence on April 1, 1963. A Shield will be presented to the district attaining the lowest injury frequency rate each fiscal year.

WORKMEN'S COMPENSATION

Compensable claims for injuries decreased in number by 131 from the previous fiscal year but Workmen's Compensation costs climbed to a new high; approximately \$51,000 over and above that of the last fiscal year.

Total number of compensable claims was 640.

Total cost was \$171,802. as compared with \$120,384. for the previous fiscal year.

Average cost per claim was \$158.02, an increase of \$67.00 over last year.

The seriousness of a small number of injuries was one of the main reasons why costs have sky-rocketed. \$68,751. was paid to the Workmen's Compensation Board for 26 claims for serious disabilities. This amount represents 68% of the total cost of compensation and medical aid.

The majority of serious disabilities are among seasonal employees on Crown Land tree planting operations and UNR Projects.

Crown Land Tree planting is being operated on a greater scale. With a greater number of men being hired for this work, injuries increased by 3%.

UNR Projects, which come under a Federal-Provincial agreement, were not continued in the winter season of 1962-63, and the number of injuries decreased accordingly.

The fire season was generally light, less men were engaged in fire fighting, and injuries on this type of work decreased.

Junior Ranger employment increased by 61 boys and injuries increased by 3.3% over last summer.

The average number of employees was approximately 300 less than last fiscal year and the percentage of employees injured was 12.5%, a decrease of 1.8%.

STAFF ATTENDANCE SUMMARY

The table below indicates the total number of employees on staff for each month of the fiscal year:

HEAD OFFICE						FIELD SERVICE					
1962	Reg.	Prob.	Mthly Rated	Cas.	H.O. Total	Reg.	Prob.	Mthly Rated	Cas.	F.S. Total	Grand Total
Apr.	618	76	17	18	729	1735	99	27	1709	3570	4299
May	621	76	17	28	742	1743	100	24	4418	6285	7027
June	611	79	18	52	760	1741	99	28	4992	6860	7620
July	617	80	14	56	767	1744	105	26	5187	7062	7829
Aug.	620	74	14	52	760	1737	105	27	4282	6151	6911
Sept.	627	66	13	26	732	1729	104	27	2999	4859	5591
Oct.	622	69	15	10	716	1725	99	26	1846	3696	4412
Nov.	635	65	11	16	727	1723	97	25	1020	2865	3592
Dec.	629	72	12	21	734	1725	106	26	926	2783	3507
1963											
Jan.	637	74	12	18	741	1759	93	25	1060	2937	3678
Feb.	631	76	13	20	740	1757	89	25	990	2861	3601
Mar.	619	80	15	24	738	1749	101	25	677	2552	3290
Aver.	624	74	14	28	741	1739	100	26	2509	4374	5113

TOTAL STAFF AS OF MARCH 31, 1963

	Reg.	Prob.	Monthly Rated	Casual	Total
Head Office	619	80	15	24	738
Field	1749	101	25	677	2552
	2368	181	40	701	3290

Total complement of year-round positions as of March 31, 1963 — 2686

Total Regular, Probationary and monthly rated staff as of March 31, 1963 ————— 2589

Total vacancies in complement as of March 31, 1963 --- 97

2686

NUMBER OF PROFESSIONAL EMPLOYEES

Foresters	Biologists	Civil Engineers	Miscellaneous	Total
233	66	7	44	350
Number of licensed scalers on staff -----				733
Number of graduates of Ranger School on Staff -----				733

STAFF TURNOVER

The table shown below lists the number of employees who discontinued their services for various reasons, as indicated, during the fiscal year:

	Resigned	Dismissed	Retired	Died	Super-annuated	Transferred	Total
Head Office	39	7	3	5	12	7	73
Field	40	4	8	11	19	0	82
Total	79	11	11	16	31	7	155

NEW EMPLOYEES

	Male	Female	Total
Head Office	42	31	73
Field	65	19	84
Total	107	50	157

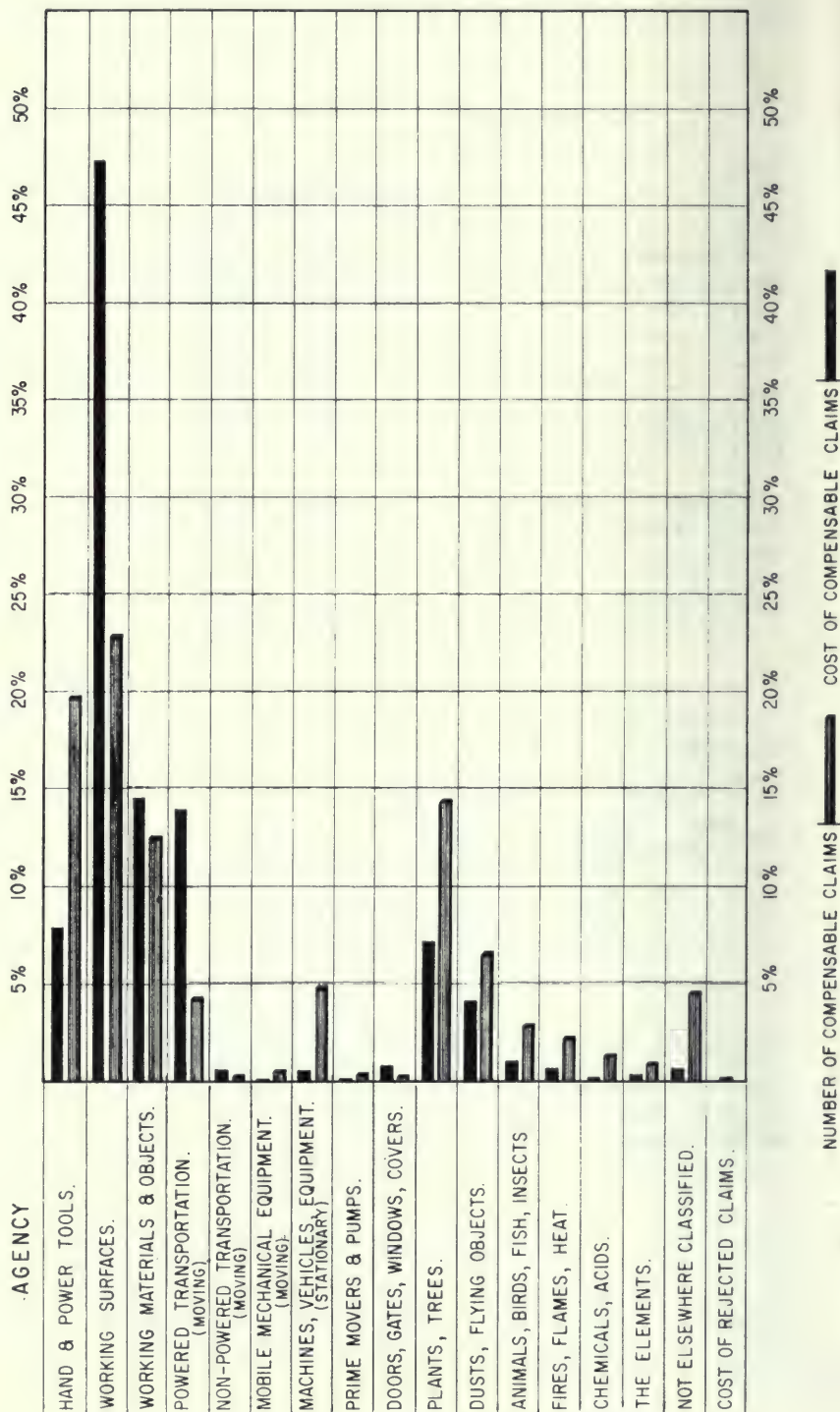
The staff turnover for the fiscal year is — 6.1%

Note: This is the ratio of separations to total regular and probationary staff.

TOTAL PERSONNEL ON STAFF

	Reg.	Prob.	Casual
March 31, 1963	2368	181	701
March 31, 1962	2348	189	1103
	20 increase	8 decrease	402 decrease

COMPARISON OF NUMBER AND COST OF COMPENSABLE INJURIES BY AGENCIES INVOLVED FOR THE FISCAL YEAR 1962 TO 63



ACCIDENT CAUSE ANALYSIS REPORT

FOR THE FISCAL YEAR 1962-63

TYPE OF ACCIDENT

AGENCY INVOLVED

	STRIKING AGAINST.	STRUCK BY.	CAUGHT IN, ON, OR BETWEEN.	FALL TO DIFFERENT LEVEL	FALL ON SAME LEVEL	BODILY REACTION OF PERSON.	CONTACT WITH ELECTRIC CURRENT.	CONTACT WITH TEMPERATURE EXTREMES.	CONTACT WITH RADIATIONS, CAUSTIC, TOXIOUS, ETC.	BITTEN OR SCRATCHED BY.	RUBBED, ABRADED, OR PENETRATED	HORSEPLAY	VIOLENCE	EXPLOSIONS	TOTAL
AXES	6	70			3										79
MANUAL HAND TOOLS. - SHOP	1	1			1	2									5
MANUAL HAND TOOLS.- WOODS		5			1	1									7
MANUAL CUTTING TOOLS. - SHOP		7													7
MANUAL CUTTING TOOLS. - WOODS	5	8				1					1				15
POWER TOOLS.	5	5	2			2									14
WORKING SURFACES	22	1	3	8	67	28					18				147
WORKING MATERIALS, OBJECTS.	14	18	6	1		31					11				81
MOVING POWERED VEHICLES.	12	4	1	3	2	2									24
MOVING NON-POWERED SNOW CONVEYANCES.		1				1									2
MOVING MOBILE MECHANICAL EQUIPMENT.	2								2						4
MOVING WATERCRAFT.			1		1										2
MOVING AIRCRAFT			1												1
MOVING RAILWAY MOTOR CARS				1											1
STATIONARY MACHINES, VEHICLES, EQUIPMENT.	8	4	1	2	3	10									28
STATIONARY WATERCRAFT											1				1
PLANTS, TREES.	15	35	1		4	12			25		1				93
DUSTS, FLYING OBJECTS.		30				1					12				43
PRIME MOVERS, PUMPS.		1	2												3
ANIMALS, BIRDS, FISH					1					3	1				5
INSECTS										14					14
FOREST FIRES					1			8							9
HOT AND INFLAMMABLE SUBSTANCES, FLAMES.								6							6
CHEMICALS, ACIDS.								8			1				9
ELEMENTS								6							6
DOORS, GATES, WINDOWS, COVERS.	2														2
PRINTING MACHINES	1		1												2
NOT ELSEWHERE CLASSIFIED	5	4	1		4	8			5	1	2				30
TOTAL	98	194	20	15	88	99	-	20	40	18	48	-	-	-	640



A wolf, taken in a lock-type snare and tranquilized, is fitted with a collar in which is embedded a transistORIZED radio. Below: a mobile receiver used to check the movements of wolves in the research conducted in Algonquin Provincial Park.



RESEARCH BRANCH

IT HAS BECOME customary to state each year the responsibilities of the Research Branch as presented to the Legislature in a White Paper of 1954:

- (1) To assess the research needs of the Department.
- (2) To secure co-operation with existing research agencies competent to meet departmental requirements.
- (3) To develop departmental research services in those fields where co-operation cannot be secured.

The assessment of research needs is usually made by discussion between the Research Branch and the management branches of the Department concerned. Proposals arising from such discussions are presented to the Department's advisory Committee on Research for their scrutiny and judgment before recommendation to the Deputy Minister.

The co-operation of existing research agencies is obtained by agreements, such as with the Canada Department of Forestry for silvicultural, pathological and entomological research; the Canada Department of Fisheries, the University of Toronto and other universities, and the Ontario Research Foundation for various research needs. Arrangements are made with private firms as required.

To meet needs that cannot be adequately satisfied by co-operation with existing research agencies, the Research Branch has set up five sections: Forestry, Fisheries, Wildlife, Mensuration and Statistics, and Mechanical Research.

Several projects which were initiated during the past year have been selected for comment here. These are representative of types of research being undertaken.

A new fisheries research endeavour was begun in 1962, with a view to co-ordinating the limnological research being carried out at the various fisheries research stations of the Department. The scientist in charge will develop an overall plan for the collection of data on currents, wave-action, temperature, dissolved oxygen concentration, and plankton abundance. An attempt will be made to collect data which are specifically related to studies on the fluctuations in year-class strengths of commercial and games fishes.

Wood quality studies were started in 1962 with the object of gaining an understanding of the specific physical and chemical qualities of the commercially important tree species of Ontario. It is expected that these studies will provide a basis for the increased supply of preferred wood species to forest industry. This program is based on co-operation between the Research Branch, the Ontario Research Foundation, and the Faculty of Forestry, University of Toronto. In 1962 field surveys were undertaken to locate superior tree specimens and obtain wood samples for laboratory analysis. Physical-chemical and pulping tests were made to ascertain significant differences between individual wood specimens.

The Research Branch, in co-operation with the Forest Protection Branch, designed and conducted an experiment in 1962 to investigate the feasibility of infrared (heat) sensory devices in detecting forest fires in Ontario. De Havilland Aircraft Ltd. was engaged, under contract, to assist the Department in the mechan-

RESEARCH BRANCH

BRANCH CHIEF: R. N. JOHNSTON

ASSISTANT BRANCH CHIEF: A. P. LESLIE

SPECIAL PROJECTS:
A. R. Fenwick

FORESTRY SECTION
D. H. Burton, Supervisor

Tree Breeding	Mid-Western
Site	Northern
Regional Silviculture	Central
Reforestation	South Central
Wood Quality	South Western
	South Eastern

FISHERIES SECTION
K. H. Loftus, Supervisor

Great Lakes	Lake Huron
	Lake Erie
	Lake Ontario
Game Fish	Lake Trout
	Brook Trout
	Smallmouth Bass
Technical Studies	Selective Breeding
(Maple Headquarters)	Limnology
	Parasitology
	Age Determination

WILDLIFE SECTION
R. O. Standfield, Supervisor

Big Game
Furbearers
Upland Game & Waterfowl
Predators
Diseases & Parasites

MECHANICAL SECTION
M. H. Baker, Supervisor

STATISTICS and MENSURATION SECTION
T. W. Dwight, Supervisor

ADMINISTRATION

Personnel
Budgeting and Accounting
Reports
Library
Public Relations

ical and electronic aspects of the experiment. The objective was to detect newly started forest fires sooner than by lookout towers and aircraft whose operation is dependent on the visual observation of smoke. Analysis of the measurement data indicated that small (2-ft. diameter) fires located in coniferous forests can produce detectable signals at least 70% of the time. Further tests would be required to assess the obstacles to practical application.

Details of the foregoing and other projects are related in the following pages.

WILDLIFE RESEARCH

The program of the Wildlife Section has been planned to provide information to support wildlife management in the province. There are, therefore, research units specializing in studies of economically important species of birds and mammals: Furbearers, Big Game, Upland Game and Waterfowl, and Predators. In addition, a program of research on wildlife diseases and parasites includes a diagnostic service to field staff throughout the province as well as fundamental studies of the effects of these factors on several species of wildlife.

Headquarters for this research is at the Southern Research Station at Maple, with several field projects centred at the Wildlife Research Station in Algonquin Park. However, most of the field research is conducted in locations throughout the province where the population of animals or their environment allows the best possible conditions for doing the work. As a result, the wildlife research program is widespread, with projects in every Forest Region in the province. Many of these projects are conducted in co-operation with the Fish and Wildlife staffs in the Forest Districts.

In addition, co-operative projects with the Ontario Veterinary and Agricultural Colleges, the Ontario Research Foundation and the Indian Affairs Branch of the Canada Department of Citizenship and Immigration supplement the research program in specialized fields.

Furbearers

Research on fur animals is providing data on populations and the factors affecting them. The results of these studies may make it possible to anticipate future changes in numbers. Accurate predictions could lead to management procedures that would moderate some of the violent population fluctuations exhibited by many of the species of furbearers in Ontario.

Studies of otter populations in Algonquin Park were continued. Thirteen otter were tagged and released as a means of obtaining data about population numbers, movements and range. Analysis of scats collected throughout the year showed that fish and crustaceans form the major winter diet, while amphibians and insects are the most important foods during the summer. Trout occurred in 2% of samples containing fish remains; the remainder were species of small fish which inhabit warm waters.

Surveys of beaver populations in Central and West Patricia Districts were continued to assess changes in density and to relate density to habitat. From the lowest point in numbers, which occurred in the period from 1949 to 1952, populations have now reached extremely high densities in the Sachigo Lake region and parts of the Hudson Bay Lowlands. In other areas populations are not so high but are steadily increasing despite heavy trapping pressure. Peak populations will probably occur over most of this region within the next few years. Analysis of fur harvest statistics for this region, to provide historical information on previous population fluctuations, were completed.

Big Game

Research on deer, moose and woodland caribou is concerned with the development of techniques for measuring numbers and with the assessment of factors affecting populations. The objectives of such studies are to understand the action of these factors and through modification of their effects to maintain optimum populations of big game animals in areas where they may be hunted. Statistics about deer and moose numbers, hunting pressure and hunting success were collected from study areas in Tweed, Parry Sound and Sioux Lookout Forest Districts. These are providing data on population changes in deer and moose and the effects of hunting on them. In addition, in co-operation with the Ontario Veterinary College, blood and tissue samples were collected at these checking stations to establish the incidence of leptospirosis in deer and moose. Analyses of these samples showed that 18% of the deer and 4% of the moose were affected. As yet, no one knows if this disease which causes abortion in cattle is a major influence on deer or moose numbers.

Other studies on moose are principally concerned with the effects of heavy hunting pressure on populations. Statistics and specimens collected at a checking station on the Red Lake road are now being studied to assess the reproductive rate of those herds which support extremely heavy hunting pressure. A report on this is anticipated for the coming year.

Winter surveys of woodland caribou populations were confined to density studies of the herd in the Woodland Crown Game Preserve. Mapping of distributions and densities of herds in the northern Patricia Districts are now almost complete. Summer studies of herd distributions and their relation to food and topography were continued to provide a basis for future research on productivity and mortality factors. Complete reports on all caribou research are in preparation.

Upland Game and Waterfowl

The objective of this research is to obtain information about several species of upland game and waterfowl which can be used to improve hunting opportunities in agricultural areas of the province.

Most research, since the unit was reactivated in 1961, has been on the characteristics of the 18 species of grouse that are found throughout the world. More intensive studies of two, sharp-tailed grouse and prairie chicken, which occur in western, central and northern parts of the province are nearing completion. This research has encompassed various attributes of each species; morphology, taxonomic relationships, and characteristics of behaviour and breeding. We expect that such intensive studies will be of real value in the future when public demand for increased hunting will necessitate more intensive management of these species.

The research on methods of assessing the reproductive success of Canada geese in the Hudson Bay Lowlands is progressing well. The success of this work is of immediate concern to the federal, provincial and state agencies in Canada and the United States represented on the Mississippi Flyway Council since northern Ontario is one of the major production areas for Canada geese hunted in the mid-western parts of the continent. The technique of taking low-level vertical photographs of flocks of geese along aerial transects is now providing good results. There is still considerable difficulty, however, in interpreting these results since the adult-to-young ratios, which are shown in the photographs, do not give a measure of the numbers of non-breeding birds. Further research is required before the method can be used with confidence for setting autumn bag limits for geese.

Predators

The research on predation, particularly where timber wolves and coyotes are most concerned, was directed toward assessing the effects of predators on big game and livestock and developing efficient control methods.

Because of staff changes some parts of the program were delayed. Those projects dealing with control methods were continued on schedule and most have now reached the stage where they can be applied. An experimental poisoning program in Sioux Lookout and Port Arthur Forests Districts removed 75 animals from a study area of 10,000 square miles over a period of three winters. Aerial surveys during the current year showed that wolves were almost eliminated from the area. Application of this method to management of predators in areas remote from human habitation is now possible but as yet no way has been found to eliminate accidental killing of fur bearers and birds. Its use in Ontario will be closely controlled.

Continued aerial surveys as part of the research on wolf populations in Algonquin Park have shown no significant increase in numbers even though there has been no control of wolves in the area since 1958. Reporting on this project is now underway.

Wildlife Diseases and Parasites

Of the numerous diseases and parasites which are known to affect various species of wildlife in Ontario, few are spectacular in their effects. Most, however, undoubtedly affect the efficiency of their host; some are responsible for widespread mortality. Continued research to establish the presence and incidence of diseases and parasites has provided the background for intensive studies of those which are thought to be of special importance to the maintenance of harvestable densities of wildlife. Two of the most important studies are those on rabies and kidney worm in mink.

RABIES

This disease, which has received a great deal of public attention in recent years, is the subject of an intensive research project. The disease, which affects red foxes and skunks primarily among wildlife species in Ontario, has been most prevalent in southern Ontario during the past three years. Here the disease is also being transmitted to livestock, and there is a continuing danger of human contact with rabid animals. Research is primarily directed toward ascertaining the relation between the disease and the density of fox populations; current studies of changes in fox populations, movements and distribution in King Township in the Lake Simcoe Forest District, have shown a low level of fox numbers and a relatively low but persistent incidence of the disease.

KIDNEY WORM

Further research on the incidence and effects of the kidney worm in wild mink has shown an increase in affected animals in the Parry Sound Forest District where the study is centred. The disease is affecting about 42% of the mink this year as compared to 30% in the previous year. There have been no clear-cut effects on the size of the population or pelt quality of mink and the study is continuing.

Miscellaneous

In co-operation with the Indian Affairs Branch of the Department of Citizenship and Immigration, part of a study of the economics of the utilization of fish and wildlife resources in northern Ontario was recently completed. The project, which assessed the problems of fish marketing from this area, has been reported and the conclusions are now being assessed.

FISHERIES RESEARCH

The fisheries research program is being developed to obtain the new facts and to develop the new techniques necessary for management of both the sport and commercial fisheries of Ontario. Constant attention is given to the task of selecting, from the many problems suggested, those which, when solved, will provide the greatest advantage to management throughout the Province, rather than locally. Continued development of the program along these practical lines demands that the close working relationship between management and research staffs be continued and constantly improved. This working relationship must be close enough that research is fully aware of the problems of management and can set project priorities accordingly, and close enough to achieve the maximum communication of research results both verbally and through reports. Constant care must be taken to avoid such close integration of effort that research is drawn into problems of local rather than province-wide priority. In other agencies, where research has failed to resist this temptation, their programs have become more and more involved in investigations of local and immediate value only, and long range planning and progress has become impossible for management.

Our present good working relationship has resulted from: frequent issue of full reports and progress reports; personal communication between research and management specialists; an annual meeting of research and management biologists; and meetings of advisory committees annually or semi-annually to discuss the programs of research at each of our Great Lakes stations. These advisory committees are made up of sportsmen, commercial fishermen, and management and research staffs from both field and head offices. Consideration is being given to formation of a similar advisory committee to consider the recently expanded sport fish research program.

During 1962 there were no major changes in our program, staff or facilities in either the Great Lakes or game fish studies. Research on the directly related field of limnology was consolidated for improved efficiency. Plans for future projects dealing with walleyes (yellow pickerel) await only funds and staff, and the field of lake classification as a means of improving inventory and maintaining our fisheries waters was explored with encouraging results.

Great Lakes Fisheries

LAKE SUPERIOR

The fisheries research program on Lake Superior remains the responsibility of the Fisheries Research Board of Canada, in accordance with the terms of the Federal-Provincial agreement for Ontario fisheries. The Fisheries Research Board is also the Canadian agent of the Great Lakes Fishery Commission and is therefore responsible for the conduct of the sea lamprey control experiment. Close contact with these programs is maintained by the Fisheries Section staff through minor

participation in the programs and by membership on various committees which plan and review the research.

The sea lamprey control experiment continued to be concentrated on Lake Superior. Runs of adult lampreys at the assessment barriers in the spring of 1962 indicated that the initial stream treatments had reduced the lamprey population by 80 percent. Summer and fall studies revealed low levels of sea lamprey predation on lake trout, and the trout population apparently responded quickly by giving evidence of modest increases in numbers, average size, and catch per unit effort.

Although we are pleased with the extent of success achieved to date in this vast experiment, it is generally thought that the lamprey population must be reduced quite a bit further before the lake trout population can regain its former level at which it can sustain a fishing industry.

The second round of stream treatment was initiated during 1962.

LAKE HURON

Tagging and associated studies have demonstrated the existence of several separate populations of whitefish in the area studied by the staff of the South Bay Fisheries Research Station. These distinct populations occur in the North Channel; in northern Georgian Bay; in southern Georgian Bay; in southern Lake Huron, off Goderich and Bayfield; in northern Lake Huron, along the south shore of Manitoulin Island; and in South Bay. The whitefish of South Bay have, for reasons of proximity to the station, received the most attention. Good numbers of these have been tagged in the experimental pound net fishery operations conducted in the spring, and recaptures indicate that during the summer and autumn they move out of South Bay and into the northern part of Georgian Bay. We do not know yet where they spawn. They return to South Bay and are recaptured in the pound nets in subsequent spring seasons. Experimental gill netting operations in South Bay in the autumn produces numbers of whitefish, but rarely individuals which have been taken and tagged in the spring pound nets. It thus appears that there may be two populations of whitefish even in a body of water as small as South Bay, and the suggestion is implicit that with more intensive work the population structure of greater Lake Huron might prove equally complex.

Each separate population of whitefish, of which we are aware, is sampled annually. There are growth differences and, perhaps more important, age differences between them. Age determinations made from scale samples tell us which year classes were successful and which were failures. From this sort of work we know that the excellent fishing of the late 1940's and early 1950's in northern Georgian Bay and South Bay was available because the hatch of 1943 was phenomenally successful. There has been no really outstanding year class in these areas since. We know also that the excellent fishing in the Goderich-Bayfield areas in 1960 and 1961 was the result of good year classes hatched in 1957 and 1958, and we know and predicted a decline in fishing quality in 1962 and 1963 because samples showed few fish of the 1959 and 1960 hatches coming along. Curiously enough, we know also that the North Channel and South Bay populations are usually strong or weak in the same years, and that the southern Georgian Bay population remains fairly stable as compared to the violent fluctuations of all other populations in the lake.

Each year, observations are made on wind, oxygen, temperature in the fall, in the spring, ice cover and all other items, including the abundance of other species, that might conceivably have a bearing on the success or failure of a whitefish year class. This is done in each area where a separate population occurs. Three, four and five years later the strength of the year class produced is deter-

mined by sampling the commercial catches. Efforts are constantly applied to find which environmental factor or combination of factors produces the failures and the strong year classes. It is believed that the answer will be achieved earlier if several populations are studied at the same time. It is hoped that we are taking measurements of the responsible factors.

Projects dealing with splake introductions at South Bay, with the smelt spawning runs, gill net selectivity and others, were continued successfully in 1962. The sudden death in September of John Budd, scientist-in-charge of the Lake Huron program, was a severe loss to fisheries research in Ontario.

LAKE ERIE

Smelt, perch and walleye (yellow pickerel) were the species on which the attention of the Wheatley Station staff was concentrated during 1962. Smelt and perch received their attention because they were the most important species to the fishery, and also because regulations restrictive to the harvest of the very abundant perch were removed in response to demands by the industry. The walleye received attention through requests by the Great Lakes Fishery Commission reflecting concern over the current scarcity of this valuable and formerly abundant species.

In the smelt studies, effort was directed to determining where smelt were concentrated at various times of the year, and why these concentrations occurred. This study required experimental trawling at grid locations adequate to cover the entire central and eastern basins (few smelt occur in the shallow western basin). In carrying out this program it was difficult for experienced fishermen to understand why the research staff fished and measured environmental conditions in areas which both fishermen and researchers were quite sure contained no smelt. It is felt however that both negative and positive measurements will reveal the "why" of smelt concentrations more quickly than will measurements only in areas of smelt schools.

Preliminary data show that in late summer smelt in the central basin may be forced down from the surface by warm water, and forced up from the bottom by oxygen deficient water, and are therefore confined to a very thin layer in the thermocline. They may then move out to the eastern basin where water conditions are more favourable. Those which do not find their way to better water conditions are nicely concentrated for trawlers, but the stress of environmental conditions may contribute to their gradual emaciation. Further work, to clarify these preliminary suggestions, is planned for 1963.

In the case of yellow perch, there was no apparent biological reason to discourage further exploitation. The research in the past had shown great abundance, high natural mortality and a suggestion of over-population. The program of study was geared to assess the impact of increased exploitation on this population. Such increased exploitation did not, in fact, develop because of economic conditions which led the fishermen to voluntarily restrict their catches. Studies did show, however, that the 1962 catch was supported largely by the 1959 year class (perch at three years of age); that catches were much larger in the western end than in the eastern end of the lake; and that growth of perch in the western end was noticeably slower than that of perch in the eastern end of the lake.

All walleye data accumulated through routine sampling of the commercial catches were summarized and presented at a Great Lakes Fishery Commission meeting held in Ottawa in 1962. Although these data were limited, they were highly significant when combined with information submitted by other agencies from the U.S. side of the lake. Our data suggested that increases in fishing pressure

in the early 1950's, which greatly increased the total harvest of this species from the lake, may have had some significance in the recent decline in abundance.

LAKE ONTARIO

The dangers for the whitefish fishery inherent in the trend towards increasing variability in year class strength which was illustrated in the recruitment study (in press) this year, were emphasized by evidence of poor recruitment into the fishery during this year. The relative absence of small fish in the summer commercial catch has until now proven a reliable indicator of low age 3 representation in the catch, and unless a striking change in the distribution or rate of growth of the whitefish has taken place, it seems probable that the 1959 year class was not a strong one. Some 4735 whitefish from 85 commercial catches were examined during 1962. The observations from the summer experimental gillnetting program similarly did not include significant numbers of fish in the size range of normal two-year-olds, which may suggest that the following 1960 year class was also weak. The members of the large 1955 and 1957 year classes were readily caught at the same netting locations in 1957 and 1959. The whitefish catch-per-unit effort was substantially reduced this year from the 1961 level (which was affected by the absence of age 2-sized fish). These observations would admittedly be more conclusive if based on age determinations, but the lack of evidence of gross growth-rate change in a wide range of past year class sizes lends quite a high probability that they are reliable. Two weak year classes in succession can be expected to reduce the commercial catch at least through 1963 and early 1964. Since the whitefish is the only species remaining to this fishery, such a gap could have a serious economic impact on the industry.

This information from the 1962 research, coupled with the information reported last year on the importance of adequate spawning stock, led to a recommendation adopted by management for a restricted harvest of whitefish as a means of improving the future outlook for this fishery.

The lake trout project was designed to assess the possibility of re-establishing a commercially useful population of lake trout in eastern Lake Ontario with a sea lamprey population continuing to exist in the area.

This program entered a new phase this year. After a large number of small plantings, it was possible to conclude only that:

- (a) there were no indications of recruitment from natural spawnings.
- (b) survival of the introduced trout has been good in recent years.
- (c) the whitefish fishery catches significant numbers of the planted trout incidentally.
- (d) the number of fish surviving to reach sexual maturity was in all probability very small.

It was suggested that the last point be examined by making two plantings of at least 100,000 yearling fish in successive years to terminate the experimental series. A request for the fish, forwarded to the Great Lakes Fishery Commission, was recently granted, and the first planting of 100,000 fish is to be made in the spring of 1963.

As was reported in 1960 and 1961, the walleye (yellow pickerel) study in the Bay of Quinte was restricted to the accumulation of data on a routine basis. This procedure was repeated in 1962 and while it allowed provision of information of immediate value to management locally, proper analysis to allow broad applicability of the results awaits additional scientific staff.

Game Fish Studies

Most of the game fish research during 1962 remained based at the Harkness Laboratory at Lake Opeongo in Algonquin Park. In lake trout studies it was demonstrated that the slow-growing plankton feeding populations, if transferred to water where a diet of fish is available to them, the trout quickly change their feeding habits and begin to grow very rapidly, even more rapidly than trout which have been accustomed to a fish diet.

BROOK TROUT

In the brook trout research program which was started in 1961 the first experimental plantings were made in specially selected lakes. These planting experiments are designed to provide data which will form the basis for developing a sound stocking rate formula for the various lake types which are routinely planted by management. The plantings also test the relative success of stocking brook trout, rainbows and splake in the same waters. The search for additional lakes suitable for additional test plantings is continuing.

SMALLMOUTH BASS

Past studies of smallmouth bass have demonstrated that strong year classes are produced in exceptionally warm summers. Such summers occurred in 1955 and in 1959. Creel census data collected during 1962 at Lake Opeongo, Parry Sound and South Bay indicate that bass of the 1959 year class had grown to a size vulnerable and attractive to the angler and contributed good numbers to the creel. Good bass fishing, supported by this strong year class, is predicted for these waters for the next two years.

Four lakes were selected and surveyed in detail earlier in 1962 for experimental plantings of bass fingerlings. Plantings of 5000 fingerlings were made in each lake in August. It is hoped that this study will help to settle the question of the usefulness of planting hatchery reared bass in waters where native populations already exist. All planted bass were marked so that in three or four years' time, when and if they form part of the angler's catch, they can be positively identified. The scientist in charge left on educational leave for post-graduate studies in the fall of 1961. His summer assistant, a graduate biologist, continued the work until the fall of 1962 when he left for budgetary reasons.

MISCELLANEOUS

A planting of arctic char in Westward Lake made in 1956 was assessed during 1962 and it was found that the species had reproduced successfully. The grayling introduction at Found Lake, although initially successful, has now disappeared, perhaps simply because of the short life span of this species. Further experimental introductions of grayling in three distinct lake types are planned for 1963.

Maple Headquarters

SELECTIVE BREEDING

The research on selective breeding in fish was continued at Maple and efforts were again confined to the splake (the selective crossings of brook trout and lake trout). The objective of this work is to develop a new trout which will be able, by reproducing at an early age, to maintain its population in the Great Lakes even if

the lamprey is not controlled. As a side product, and perhaps even more important than the immediate objective, much is being learned about the patterns of character inheritance in fish. Such new knowledge and techniques may one day be as important in the management of fisheries as it has become in livestock, agriculture and horticulture. The additional physical facilities required, primarily water supply and rearing facilities, were not made available in 1962, and losses from disease intensified by overcrowding greatly reduced progress. In the mass selection phase of the project, a complete year class had to be discarded. Advances on the theoretical level were achieved but numbers of individually selected fishes were reduced by mortalities to levels where the production of practical numbers was jeopardized seriously.

LIMNOLOGY

A new research endeavour in the field of limnology was launched in 1962. This is vital to all fisheries studies which search for causes of the violent and costly fluctuations in year class strength of species such as bass, walleye and whitefish. The scientist in charge will co-ordinate and give needed direction to the assimilation of data collected by all other research units. He is expected to develop an over-all plan for the collection of data on currents, wave-action, temperature, dissolved oxygen concentration, ice cover, plankton bloom and any other factors which may be related to the success or failure of year class strength. Such co-ordination and direction is expected to provide greater efficiency and speedier progress in the various fisheries projects. This research unit is also expected to provide effective and productive liaison with the Great Lakes Institute which is supported by our funds in its limnological research over all the Great Lakes.

PARASITOLOGY

The work on parasites of fishes, as yet still in a preliminary stage of development, revealed so many new records of parasites on so many different species that, at this time, we can only be very much impressed with our ignorance. Parasites and diseases on human populations are the subjects of tremendous research activities because they cause death. In fisheries they are in all probability equally or more important in their effect on populations. We know little, as yet, about what parasites and diseases infect the important species of fish, let alone their effect or their cure.

MISCELLANEOUS

Other headquarters staff performed administrative duties and ensured co-ordination between research units of the section and between the section and other agencies in Ontario and other provinces and countries. This function greatly increases the effective amount of research applied to fisheries in Ontario beyond the amount actually undertaken in the province.

FORESTRY RESEARCH

The integrated forestry research program is described below under the headings of Silvicultural Research Units, Site, Reforestation, Tree Breeding, Quality Wood, and White Pine Blister Rust Reconnaissance Surveys.

Silvicultural Research Units

Silvicultural research units have been established in the different administrative regions of the province to study those characteristics of the commercial tree species which affect growth and reproduction. The object is to develop cultural practices which will ensure maximum production of quality wood within economic limits. Such knowledge is essential for the proper management of the forest resource of Ontario. An outline of the status of the main projects for each regional unit is given below.

MID-WESTERN FOREST RESEARCH UNIT

During 1962, the program of studies on the silvicultural characteristics of the commercially important tree species of the area was continued. White spruce, balsam fir, black spruce and jack pine are the most important species for study in this region.

Natural Regeneration. In the white spruce - balsam fir forest type, 3200 mil-acre quadrats have been established to compare the regeneration obtained following the conventional cutting of all merchantable trees on an area, with that obtained when some white spruce were left to provide a seed source. An improved seedbed was obtained by disturbing the ground surface in two ways, by mechanical scarification and by the use of tree-length logging. Preliminary results have shown an improvement in the numbers of white spruce seedlings when seed trees were present; however, severe competition has developed from underbrush and other tree species.

The assessment of regeneration in black spruce - jack pine stands following conventional clear-cutting, was carried out on 1060 mil-acre quadrats established in 1949 in the Auden area. This study of regeneration, stand composition changes and growth will be continued.

NORTHERN FOREST RESEARCH UNIT

The study of the silvics of the important trees in the black spruce cover type was continued. The satisfactory development of black spruce growing on lowland sites is the main objective in this unit.

Natural Regeneration. An experiment to improve the growth of spruce regeneration on deep peat soils, by lowering the water table with drainage ditches, was established in 1960 on the Leitch township research reserve. Weekly measurements of water table levels were taken throughout the growing season. Ditches that were made two years previously had become partially filled by peat; these were re-opened, in part by manual labour and in part by dynamiting. Additional strips were cleared of trees for later dynamiting of drainage ditches. This project has indicated that the lateral flow of water into the drainage ditches has been slight.

The literature from Russia and the Scandinavian countries, which have similar peat problems, has been followed closely to assess their methods of dealing with peat.

An experimental cutting was carried out during 1951 in a black spruce stand in Leitch township to determine the effect of different cutting methods on regeneration. This study is continuing.

CENTRAL FOREST RESEARCH UNIT

The work of this research unit consists both of field and laboratory studies of problems of tree nutrition related particularly to forest disturbance and

regeneration. It includes studies of the ecology of red spruce, and work on smelter fume pollution in relation to forest soils and vegetation.

Tree Nutrition, Forest Disturbance and Regeneration. These studies are designed to provide explanations for such questions as why some tree seedlings grow better than others as a result of different types of scarification, and whether or not repeated prescribed burning has a detrimental effect on forest soils.

Studies are under way on the effects of prescribed burning and scarification on nutrient release in the soil, and the uptake of these nutrients on the growth of tree seedlings.

Productivity Ecology of Red Spruce. The red spruce tree has characteristics which should prove very useful in improving the productivity of derelict tolerant hardwood and mixed-wood stands. The study is designed to measure the growth and productivity of red spruce in pure and mixed stands on the complete range of physiographic sites across its range in Ontario.

Information derived from this study should prove useful in studying all spruces, and comparative measurements are being made on white and black spruce when these species occur in association with red spruce.

It is hoped to provide explanations of differences in spruce growth as related to nutrient uptake from forest soils. In addition, total productivity (dry weight production) and ground flora relationships are being investigated.

This is probably the first time in Canada that foliar sampling and analysis of tall trees is being attempted. It is hoped to make use of the most modern techniques available, such as computer programming in working up the data in order to save time and obtain the most definitive information.

Work proceeding on the genetic variation in spruce includes the examination of different strains for the best ecological characteristics. Early indications are that natural or artificial hybrids between red and black spruce, while possibly possessing some hybrid vigour, are not nearly as desirable as the parent species. The hybrids are exceedingly rough and limby. A large scale experimental under-planting has been established, and assistance to the Timber Branch on the establishment of seed production areas is continuing. This includes the location and demarcation of suitable spruce stands, and the selection of the trees to be used for release and subsequent seed collection.

Smelter Fume Pollution. The objective of this study is to provide information on the nature of smelter fume damage and its effects on forest vegetation, forest soils and waters as a prerequisite for suggesting means of pollution control and the best means of forest land management under the circumstances.

The research officer and a member of the Botany Department, University of Toronto, have carried out studies at both Sudbury and Wawa on the fallout from mine ore smelter fumes and the effects on forest soil, lake waters, aquatic and forest vegetation. A series of four papers on this subject has now been published.

SOUTH CENTRAL FOREST RESEARCH UNIT

Most of the research effort has been directed towards the major commercial species in this region: white and red pine, hard maple and yellow birch.

Sugar Maple Growth and Quality. Studies are being conducted to show how defect is associated with growth or growing conditions and to define the conditions under which suitable growth and quality of sugar (hard) maple can be attained.

Cross sections of sugar maple trees which were felled commercially were obtained for tree development studies. Growth measurements taken from these samples indicated that tree quality was dependent on continued rapid growth. Defects and decay tend to be associated with slow growth.

The development of defect associated with natural branch pruning was analyzed with respect to growth rate and stand conditions using an I.B.M. 650 computer. This study showed that by manipulating growing conditions through cutting or improvement work, this defect may be reduced. Additional information of a similar nature was collected in the field on other wound types such as logging scars and fire scars. An artificial wound inducement experiment was commenced in co-operation with the Federal Forest Pathology Laboratory to substantiate these findings.

Stand structure and basal area studies were started in a stand of hard maple, beech and yellow birch. All trees on a 6-acre block were measured and mapped. Preliminary analysis of this information indicates that useful control guides for timber marking may be developed.

Preliminary plans are being made to develop a demonstration management area in co-operation with the Parry Sound District. This should provide a useful training and study area for silvics, timber marking, tree grading, stand structure, regeneration and growing stock regulation on some of the major combinations of cover types and land types in the region.

Yellow Birch. The large quantities of mature yellow birch which occur in the Parry Sound and Pembroke Districts have been available to meet the heavy demand for this valuable tree. However, the paucity of second growth yellow birch timber and the general failure of its regeneration after logging indicated a need to learn its requirements.

Basic studies have been undertaken to determine the seedbed and light requirements on sites where yellow birch reaches its best development. Knowledge gained from the studies supports the belief that successive crops may be obtained under suitable conditions.

Experimental cutting methods have been undertaken and tallies are continuing on plots in the Swan Lake forest research reserve.

White and Red Pine Regeneration and Growth. This work is designed to evaluate various techniques for establishing regeneration and improving the growth of pine to re-establish the once extremely important pine lumbering industry. Ten-year measurement data were obtained in thinned plots in Pembroke District. A second group of plots, to be remeasured in 1963, will provide the last data required for reporting purposes. Present results indicate the thinning treatments were effective in modifying growth rates. Good growth of survivors occurred only where the heavier cuttings were made. On dry sites important reductions in numbers of natural seedlings occurred with all regeneration treatments.

An underplanting experiment using white pine is now nine years old. Release of these trees by axe-girdling has indicated that immediate release is most beneficial for all species in terms of growth and survival.

Tubed Seedlings. The objective of this work is to develop an acceptable and inexpensive method of reforestation which could be useful in extending the planting season and in providing stock for planting immediately after wildfires, and on short notice.

The survival of tubed seedlings one year following planting has been good (about 90%) and height growth in open plantings was only slightly less than that of nursery seedlings. A small-scale operational planting was carried out in a recent burn, using stock six weeks old.

SOUTH WESTERN FOREST RESEARCH UNIT

The research program of this unit is confined to the specific woodlot and plantation problems of primary importance in southern Ontario. For example,

experiments have been designed for the establishment of high quality silver maple in swamps which have been devastated by the Dutch Elm Disease. This problem has stimulated an intensive search for high quality silver maple phenotypes which could be used as a nucleus for propagating quality trees of this species in southern Ontario. To date, nine such trees have been located in the Lake Erie District and propagated by budding at the Orono Forest Nursery. In addition, silver maple and eastern cottonwood have been planted under swamp conditions with considerable success. Red oak and hybrid poplar have also been successfully established under cultivated conditions on sites which are normally planted with white and red pine.

Tree Species Research. Measurements showing the annual diameter growth and the seasonal diameter growth patterns of hard maple, American basswood, white ash, silver maple, bur oak and red pine have been collected at bi-monthly intervals during the growing season to determine the effects of thinning, spacing and pruning on diameter growth.

Forest Chemical Studies. Forest chemical research studies have indicated that 2,4-D ester at the rate of two pounds acid equivalent in ten gallons of water is an extremely effective dosage for eliminating hawthorn and wild apple when applied in mist form as a foliage spray. Such a spray may be used scientifically on weed species growing on rough land, prior to planting with valuable forest trees.

Mechanical Research. The Cram Injector was tested as a special instrument for applying silvicides to the bole of low quality trees for chemical thinning purposes. It was highly successful on poplar, white birch and alder.

Soil Conservation Research. Gully erosion studies in the John Pierce Park indicated that vegetative control alone is inadequate for preventing serious soil erosion in this gully, and such measures can only be successful provided the run-off during peak flood periods can be controlled with one or more dams. However, if run-off can be controlled mechanically, it is recommended that black locust be planted on the dry gully sides and willow on the low spots, as both species when established will prevent or reduce surface erosion.

SOUTH EASTERN FOREST RESEARCH UNIT

The main objectives of this unit are to determine the effects of prescribed burning as an aid to forest management in Ontario, and to learn the silvics of basswood relating especially to germination problems.

Prescribed Burning. Spring burning was carried out again in a small diameter hardwood stand, mainly of coppice origin, to evaluate the use of fire as a means of eliminating undesirable reproduction. Maple stems up to 1-inch diameter were destroyed by a single fire of moderate intensity. A preliminary test was made of the germination of seeds of four coniferous species on a seedbed prepared by spring burning.

In October, 1962, burning was completed in three study areas in hardwood stands and in a 9-acre tract in the University of Toronto Forest. The effects of these and previous burns are being studied, but it is already apparent that fall burning in hardwoods does provide a satisfactory seedbed for seed falling subsequent to the burn.

Although complete preburn planning and preparation are necessary for all prescribed burns, their value was emphasized last fall when this unit was able to take advantage of suitable burning conditions which unusual weather conditions had created during a 24-hour period.

Basswood. The emphasis has been on obtaining satisfactory germination of seeds, and on the survival and growth of seedlings when underplanted in natural

stands and plantations to increase their value. Seed was collected periodically from selected trees and stored under various conditions prior to seeding tests in 1963.

In the spring of 1962, over 1300 basswood seedlings were planted in a hardwood stand that had been cut selectively in 1958. Their survival and growth will be recorded and compared with that of natural hardwood seedlings of similar size and age.

White Spruce Regeneration Survey. In connection with an experimental program aimed at combining deer management and timber management, a regeneration survey was made of a cutover area in the Tweed Forest District to determine the adequacy of the spruce component.

Site Research

Site research is the study of the productivity of land. Knowledge pertaining to the relationships between soils, climates and crops are organized in a classification system adaptable to various kinds of management of renewable natural resources in Ontario. The forest is the major crop considered, but the classification system also provides a biological basis for rating the potential of land for fish, wildlife, agriculture and recreation.

Research in the productivity of land is considered under three groupings: Regional Site Research, Factorial Site Research, and Site Evaluation Research.

REGIONAL SITE RESEARCH

Regional Site Research is the study of the variations in the relationships between soils, climates and forests from place to place and evaluates their significance for management. Mapping of physiography on a broad basis is performed to indicate the distribution of land patterns.

Regional fieldwork has been continued in northwestern Ontario. Initial mapping of landtype patterns was carried out on 2,500 square miles east of Lake Nipigon, while previously mapped areas were checked on an additional 3,000 square miles west of the lake. A paper, "Glacial Features of the Canadian Lake-head Area", was submitted for publication in *The Canadian Geographer*.

The main emphasis of fieldwork in northwestern Ontario was upon the collection of data pertaining to glacial features of the area. This data will form the basis for a report similar to the published report of glacial history for northwestern Ontario.

FACTORIAL SITE RESEARCH

Factorial Site Research is the study of individual site factors and their role in productivity of common sites in Ontario. Soil nutrients and soil moisture are at present under investigation.

In soil nutrient research, a study on release of calcium from minerals is almost finalized and techniques are being developed to determine the relative value of soil parent materials as primary sources of nutrients.

Facilities for soil moisture research were established and testing of equipment has progressed. A paper, "The Water Balance of the University Forest", was published in the technical report series of the Faculty of Forestry, University of Toronto, whilst a Research Information Paper, "Water Potential and the Movement of Soil Water", is on the press.

SITE EVALUATION RESEARCH

Site Evaluation Research is the study of the productive capacity of land categories for various crops under various types of management.

For a reference area in the southeastern region, use capability ratings were developed for timber, fish, wildlife, agriculture and recreation. A paper, "The Regional Approach to Land-Use Capability Ratings", was presented at a seminar on a National Land Capability Inventory in Ottawa, organized by the Directorate of the Agricultural Rehabilitation and Development Act (ARDA).

MISCELLANEOUS

The facilities of the draughting room and soils laboratory were fully used in various phases of site research.

Work of the Site Unit was explained to visiting groups such as members of the World Meteorological Organization and to participants of the joint meeting of the Canadian Institute of Forestry and the Society of American Foresters. Members participated in the Northeastern Forest Soils Conference in Pennsylvania. One member, while on holidays in Europe, also visited during a ten-day period with the Department's support a number of forest soil institutes in West Germany to discuss site classification and soil nutrients.

Reforestation Research

The objective of this unit is to procure information for the scientific advancement of the reforestation program of the Department. It is closely associated with the work of the Reforestation and Silviculture Sections of the Timber Branch. The research program is conducted largely through experiments at the nurseries, on the planting sites and in plantations.

NURSERY STUDIES

Several long-term studies in the nurseries, coupled with shorter studies, have yielded information pertaining to nursery operations. An assessment of the statistical methods of sampling, as applied to nursery stock inventory, has been made. Studies of methods of root pruning to produce better seedling stock are being continued. The program of artificial acidification of nursery soils has produced valuable information which awaits final assessment in terms of the success of the planting stock.

PLANTING METHODS

Several experiments and studies have been directed to the relationships between variations of establishment techniques and the survival and growth of the tree. Some information is available on growth to the end of the tenth year following several methods of hand and machine planting. A detailed study has been conducted in one area where large-scale planting failures had been observed. Much of the work has emphasized the need for consistent care in all phases of the operation — both in the nursery and in the outplanting — and of the important influences of local weather on the success of plantations.

FOREST FERTILIZATION

A number of experimental plots which have been fertilized in various ways, following soil and foliar analysis, are being studied. The growth of trees is recorded

by means of dendrometer tapes, some placed at regular intervals up the trees. Most of the work is done in red pine plantations, but some work had been started on other species.

Additional work is being done on the uses of fertilizers at the time of planting to assist in the rapid establishment of new plantations.

FROST DAMAGE TO PLANTATION

Frost damage is a serious problem of plantations in some areas. Experimental work continues on the relationship of the rates of dehardening of plant tissues to frost damage and kill. Laboratory techniques related to the artificial simulation of frost, and rapid measurement of damage through electrical resistance changes, are progressing.

Forest Tree Breeding

Breeding work with white pine, hard pines, aspen poplars and white cedar was continued. Work with chestnut was retained on a maintenance basis.

WHITE PINE

Resistance to blister rust and weevil, and satisfactory growth form and growth rate were the main objectives in breeding.

The acquisition of new materials consisted of scions of 47 clones of white pine and 15 clones of exotic species. The selection for resistance to blister rust comprised 92 clones of white pine and 14 clones of various hybrids and exotic species.

The crosses made in 1962 consisted of 20 different kinds, used 511 bags and yielded 942 young cones. Another thousand field grafts for weevil resistance studies were made at the Kirkwood Management Unit.

A pruning experiment, to induce early pollen production in grafts, was initiated.

A provenance test plantation, established in the Ganaraska Forest in 1951, received its first thinning.

A total of 2575 cuttings from 41 selected young trees of seedling origin were treated with Rootone and planted in propagation beds in the fall.

HARD PINES

The development of new types, resistant to the European shoot moth and superior in growth form and growth rate, continued to be the aim of this project.

The study of the effects of inbreeding in red pine continued to be the most active part of the program. Growth measurements of seedlings resulting from both self-pollination and cross-pollination on nine trees at Vivian Forest support the previous conclusion that these trees are genetically uniform. Of the 150 pollinations made in 1961 on 50 trees, representing a considerable portion of the red pine range, 101 yielded viable seeds. The flower, cone, seed, germination and seedling data indicate that red pine is homozygous for a large number of alleles. It is self-fertile and self-compatible, and seedlings resulting from self-pollination exhibit little inbreeding depression. Pollinations, using pollens of widely different sources, were made on 59 trees. No evidence was found indicating the presence of different races of red pine. Studies of natural variation in red pine supported the conclusion that this species is morphologically uniform throughout its range.

Similar, but more limited, studies with jack pine and white pine indicated that

these species are genetically much more variable than red pine. The hybridization was mainly within the *Lariciones* section. Interspecific pollinations were made on 1531 flowers of 36 clones, involving the species: *P. resinosa*, *silvestris*, *nigra*, *mugo*, *densiflora*, *tabulaeformis*, *hwangshanensis* and some interspecific hybrids of the above. The cross *P. pungens* x *banksiana* was also attempted. A single red pine bearing a genetic marker was pollinated with different mixtures of self and dead pollen to determine if there was a selection against this marker.

Six clones of *P. mugo*, two of *P. silvestris*, as well as seedling populations of *P. resinosa*, *silvestris* and *hwangshanensis* were the main acquisitions. Scions from six *P. rigida* and four *P. rigida* x *echinata*, and seeds from populations of *P. rigida* x *elliottii*, *P. rigida* x *echinata* were also acquired.

POPLAR

The production of aspen-like hybrids, suitable for growing in southern Ontario continued to be the chief aim of this project.

The new acquisitions comprised 15 clones and four populations, mostly of aspen materials. A total of 155 new clones were selected, mainly on the basis of growth rate, growth form and freedom from disease.

In the fall of 1961, a total of 7383 cuttings were set out for rooting ability tests. Of these, 4920 were used in a more detailed analysis and represented 82 clones. Only four clones of *P. alba* in this test had a rooting ability of 65% or over. Thus far no first-generation aspen hybrids have reached this level of rooting. In the fall of 1962 a total of 9608 cuttings were set out for rooting ability tests and of these, 2460 represented 41 clones for more detailed observations. Poplar materials were supplied to establish four test plantations with a total of 3902 plants.

WHITE CEDAR

The production of improved types of this species and of western red cedar hybrids, hardy in southern Ontario, is the aim of this project.

The survival of some western red cedar populations set out in the Ganaraska Forest in 1961 was tallied. Several populations contained a relatively high proportion of plants which are winter hardy at this locality. A number of rooted cuttings and hybrid seedlings were set out on their permanent location at the Southern Research Station.

SWEET CHESTNUT (*Castanea*)

The aim of this project is the production of hardy dwarf types, resistant to blight and suitable as dwarfing stocks in a breeding program with timber-type chestnuts.

No new work was undertaken on this project.

Wood Quality

Three wood quality symposia were held during 1959 and 1960, initiated by the Department of Lands and Forests and sponsored by the Advisory Committee on Forestry and Forest Products. As a result of these meetings a Wood Quality Unit was established within the Research Branch, Department of Lands and Forests in June 1962, and the Ontario Research Foundation was engaged on an annual contract to develop a program under the guidance of an Advisory Committee, consisting of appropriate heads of staff in the Research Branch, Faculty of Forestry,

University of Toronto and Ontario Research Foundation. The purpose of these studies is to obtain an understanding of the specific physical and chemical characteristics which provide the basis for the preference of forest industry for certain wood species.

RESEARCH BRANCH

During the past year the Research Branch has: a) established the nucleus of a staff specifically concerned with this project; b) designated two species, black spruce and red pine, for study in order of priority; c) conducted field surveys to locate superior trees, and supplied sampling material to the Ontario Research Foundation for laboratory analysis.

ONTARIO RESEARCH FOUNDATION

The Ontario Research Foundation has: a) established the nucleus of a laboratory staff specifically concerned with this project; b) assembled and designed special laboratory equipment and developed special techniques; c) conducted laboratory studies of samples supplied by the Department and provided appropriate technical reports.

Poplar was selected as the first species for examination during the orientation period. One of the objectives was to assess the normal variation which might be expected between trees of the same genetic background and the same life history. Using physical-chemical and pulping tests, significant differences between individual specimens were found. However, the differences were not consistent between groups of trees of similar parentage, except for one factor analyzed, that of percentage of lignin content. It was concluded that either differences in micro-environment controlled wood properties, or the trees selected were not truly of the same parentage.

When black spruce was accepted as the species of first importance, preliminary studies were carried out to relate the external characteristics of tree foliage to internal wood fibre properties such as fibre length and diameter, cell wall thickness and wood density. Preliminary analysis indicated an incidental relationship between needle spacing and tree growth. In the middle of the needle density range higher densities were associated with greater height growth, whereas extremely high and low densities were associated respectively with very poor and very good growth. Verification of this hypothesis is now being made.

UNIVERSITY OF TORONTO

The program of the University of Toronto was not started in 1962. Plans were, however, formulated to commence early in 1963 with their studies on the effect of environmental factors on diameter, wall thickness, and lignification of wood fibre cells. These fibre attributes will be correlated with environmental conditions under strict control in growth chambers.

White Pine Blister Rust Reconnaissance Surveys

Reconnaissance surveys are conducted annually by the Research Branch, in co-operation with the Forest Protection Branch and the Forest Districts which are within the commercial range of white pine in Ontario.

The purpose of the surveys, as well as the coincident scientific examinations and appraisals, is to obtain information and provide a basis for recommendations which will assist the Department in its protection and timber management plans

and decisions. These would include the salvage of operable diseased white pine timber before complete loss; infection controls, such as in Ribes eradication programs; production of rust-free nursery stock; and selection of planting sites with a minimum hazard for rust infection.

In 1962, examinations (or in some cases re-examination) were made in the Little Nipissing River area in the Pembroke District, Simcoe County in the Lake Simcoe District, North and South Dumfries Townships in the Lake Huron District, the Nipigon valley of the Port Arthur District, and several areas in the Fort Frances District.

Surveys and investigations in recent years within the commercial range of white pine in northern Ontario have indicated that in some areas the disease is severe and increasing.

Miscellaneous Note. Mr. J. Holowacz, a forester in the Research Branch, returned from educational leave after successfully completing a Master's degree course in Forest Economics.

STATISTICS AND MENSURATION

This section is maintained primarily to carry out a policy of proper initial design of experiments and of correct analysis of the resulting data. Details of the experimental work are reported by the sections carrying out the field work.

The variety of experimental data to be analyzed covers a wide range including mortality and growth of planted trees to test the effect of different methods of treatment such as variation in baling and storage methods, root pruning, fertilization, thinning, etc.; standards for culling and grading nursery stock; methods of securing accurate inventories of numbers of trees in nurseries; variation in soil flora following prescribed burning; inherited characteristics of different strains of tree species with particular reference to resistance to insect and fungus attack, and to requirements for optimum seed germination; effects of herbicides; statistics of age and weight of deer; animal censuses.

In addition, work in forest mensuration is carried out since it requires use of similar techniques.

Determination of Volume of Wood Cut

Objective: To investigate possible alternative methods to the present method of complete scaling of timber cut on crown lands.

Three experimental cruises of standing timber that were later cut and scaled have been carried out. The check of the cruised volume with scale was, in two cases, satisfactory. Final scale figures in the third case are not yet available. The question of the scaling in some cases of only a sample of the wood cut and also of substituting weighing for scaling diameters are being considered.

Growth of White Pine

Objective: To obtain knowledge of the growth of white pine and a basis for estimating future yields of young pine. Also, to test a proposed index diameter method of estimating yield.

The field work has been completed and working up of the data is in progress.

Permanent Sample Plots

Objective: To obtain knowledge of tree growth and of the effect of thinnings, release cuttings, etc., by a periodic remeasurement of plots.

The measurement of plots established on agreement forests was taken over by this section this year at the request of the Timber Branch. The plots on the York County Forest were measured and thinned.

Next year, the plots on the Simcoe County Forest and some of the plots established by the University of Toronto in the Petawawa Management Unit are due for remeasurement and thinning.

Volume Tables

Objective: Construction of volume tables for our principal timber species.

Co-operation has been furnished in an investigation by a graduate student in the Faculty of Forestry into methods of constructing volume tables on an IBM computer. It is expected to make use of the techniques developed to construct volume tables from the data for about 25,000 trees available in the Department.

MECHANICAL RESEARCH

The function of the Mechanical Research Section is to develop, improve and test equipment and instruments to meet the special needs of the Department in protection, utilization and management. The Section is called upon particularly to design and construct unique pieces of equipment to carry out its numerous projects to the best advantage. Consulting and supplying technical advice in the field of mechanical engineering is another important function of the Section.

The projects described below illustrate the scope of the work undertaken in the past year.

Forest Fire Pump Tests

The operation of the forest fire pump and fire fighting equipment laboratory was continued throughout the year. Especial emphasis was placed on testing 2-cycle fire pump engine lubricants. Test results showed that the use of a naphthenic base 2-cycle engine oil would increase the endurance of the Mark I fire pump substantially.

Portable Steam Cooker

A cooker was constructed for use at fire camps to provide better meals for forest fire fighters, and also to eliminate waste occasioned by inadequate cooking facilities. The cooker permits the serving of hot meals on a 24-hour basis.

Aerial Forest Tree Seeder

A seeding device was designed and constructed to sow seeds from a helicopter. Incorporated in the design was a means of closely controlling the weight of seed sown per acre. Field trials were made in the spring and late fall of 1962, and reports indicate that its performance was very satisfactory. However, it took almost a full day to mount the model produced, and a modified seeder will be constructed which will enable it to be quickly mounted and detached from a helicopter.

Splake Selection Apparatus

A water re-circulator has been designed for use in the trout hybrid breeding program of the fisheries research section. The construction of a pilot model was started and will be ready for a three-month test in 1963. The intention is to con-

serve water in fish-holding tanks, by means of special filters and close temperature controls.

Tubed Seedling Filler

A project of the forestry research section has progressed to a point where large-scale field tests are justified in planting tree seeds in special tubes. The construction of a machine has been started to fill the tubes with soil and plant the seeds in one quick operation. The development of the most suitable type of tube is one part of the problem.

Snowmobile Modification

A snowmobile which was originally built by the section is being modified. The machine has been found to be the best means by which fish and game overseers can inspect fish huts and other winter operations on Lake Simcoe.

Jet-drive Steel Trapnet Boat

A 24-foot steel trapnet boat with a jet-drive unit powered by a 6-cylinder gasoline engine was built in the fall of 1962 for use on the Lake-of-the-Woods.

Research Vessels

Among the many other projects, diesel engine installations and modifications were made on two research boats.

INFRARED FOREST FIRE DETECTION EXPERIMENT

The Research Branch was instructed in 1961 to make a study of the feasibility of using infrared heat sensory equipment in the detection of forest fires, when they actually start, "to solve a problem that should make for more efficient forest protection". The objective is to detect fires sooner than by present visual means.

Small forest fires which have just started do not usually put up sufficient smoke for visual detection, either from lookout towers or aircraft. They burn, and increase in size, for some time before they are seen.

Newly started fires in the forest cannot be seen under the extensive smoke pall of large going fires, nor can they be seen at night.

The Research Branch designed and conducted an experiment in 1962, in co-operation with the Forest Protection Branch. The Special Products and Applied Research Division of De Havilland Aircraft Ltd. was engaged, under contract, to assist the Department in the mechanical and electronic aspects of the experiment and the reduction of the measurement data, as both called for specialized skills and knowledge.

The infrared equipment used consisted of a TIA radiometer and fly-over recorder, loaned to the Department by the Defence Research Board of Canada/CARDE.

No night flying was undertaken or tests made through smoke haze, as this particular experiment was dependent on a fly-over recorder which photographed both the ground below the Beaver aircraft used and the infrared signals within the field of view of the radiometer installed.

The test areas were selected in the Sault Ste. Marie and Lake Simcoe Districts. Fires of uniform size and intensity were spaced in various densities of coniferous

forest cover, and the aircraft in which the infrared equipment was installed made repeated flights over the fire targets.

Analysis of the measurement data indicated that small (2-ft. diameter) smokeless fires located in the coniferous forests selected can produce detectable signals at least 70% of the time on the TIA radiometric equipment used.

None of these fires could be seen at any time by observers in aircraft, nor could they be seen from lookout towers.

This 1962 experiment provided only an assessment of possibilities. Further tests would be required to assess the obstacles to practical application.

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Weights of Ontario Moose. D. W. Simkin. Ont. Fish and Wildl. Review. Vol. 1, No. 6, pp. 10-12, 1962.

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Fisheries

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Status of Fisheries Research Projects for the Year 1961. Section Report (Fisheries) No. 44. *

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Brook Trout Lakes and the Role of Hatchery Fish. J. M. Fraser. Research Information Paper (Fisheries) No. 22. *

Forestry

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Soil-vegetation Relationships in the Boreal Clay Belts of Eastern Canada. G. A. Hills. National Museum of Canada, Cat. No. R92-2162. (in Rept. on Botanical Excursion to the Boreal Forest Region in Northern Quebec and Ontario, edited by W. K. W. Baldwin). (Available through Queen's Printer, Ottawa.) 1962.

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The Water Balance of the University of Toronto Forest. G. Pierpoint and J. L. Farrar. University of Toronto, Faculty of Forestry, Tech. Report No. 3, 1962.

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Electrical Resistance as a Measure of Injury to Conifers by Unfavourable Temperatures. C. Glerum. Forest Science 8 (3) September 1962.

Storage of Planting Stock in the Field. R. E. Mullin. Forestry Chronicle 38 (3) September 1962.

Growth of White Spruce in the Nursery. R. E. Mullin. Forestry Science 9 (1) March 1963.

Moisture Relations of Nursery Stock. R. H. Leech. Tree Planters' Notes No. 52, 1962. U.S. Forest Service.

Some Observations of the Effects of 2,4,5-T Basal Spray on Tree Species, Conger Township 1954-1958. G. A. Sinclair. Research Section Report (Forestry) No. 43. *

Progress Report of Prescribed Burning in Hardwood Stands in Ontario 1960. G. A. Sinclair. Research Section Report (Forestry) No. 45. *

Over-winter Storage of Coniferous Seedlings as a Means of Preventing Late Frost Damage. Jorgensen E. and W. Stanek. Forestry Chronicle. Vol. 38, No. 2, 1962.

Some Effects of Smelter Pollution upon Aquatic Vegetation Near Sudbury, Ontario. Eville Gorham and Alan G. Gordon. Canadian Journal of Botany, Vol. 41, 1963.

Ecological Aspects of Air Pollution from an Iron Sintering Plant at Wawa, Ontario. Alan G. Gordon and Eville Gorham. Canadian Journal of Botany, Vol. 41, 1963.

* Reports distributed only to Department staff.



A demonstration woodland in Lindsay Forest District.

TIMBER BRANCH

Responsibilities of Timber Branch

1. Timber sales and Licences, measuring of timber cut, preparation of accounts for collection of stumpage charges, compiling of statistics.
2. Production of planting stock at tree nurseries. This includes acquisition, treatment, storage, distributing seed, the establishment of seed production plots, and the distribution of nursery stock for planting.
3. Management on a sustained yield basis of the Forests of the Province, the preparation of the forest inventory and its continuous up-dating. Preparation and analysis of operating and management plans covering Crown and Company management units. Directing cutting methods to promote natural regeneration and release cutting for stand improvement.
4. Supervision of reforestation on Crown land by tree planting and direct seeding and other means.
5. Extension Forestry which assists organizations and individuals interested in reforestation, woodlot management and conservation.
6. Management and reforestation of demonstration forests, County and Municipal forests, Conservation Authority forests under agreement for management.
7. Planning and supervision of the construction of forest access roads to open up wood producing areas.
8. Licensing of sawmills, pulp and paper mills.
9. Registration and licensing of scalers.

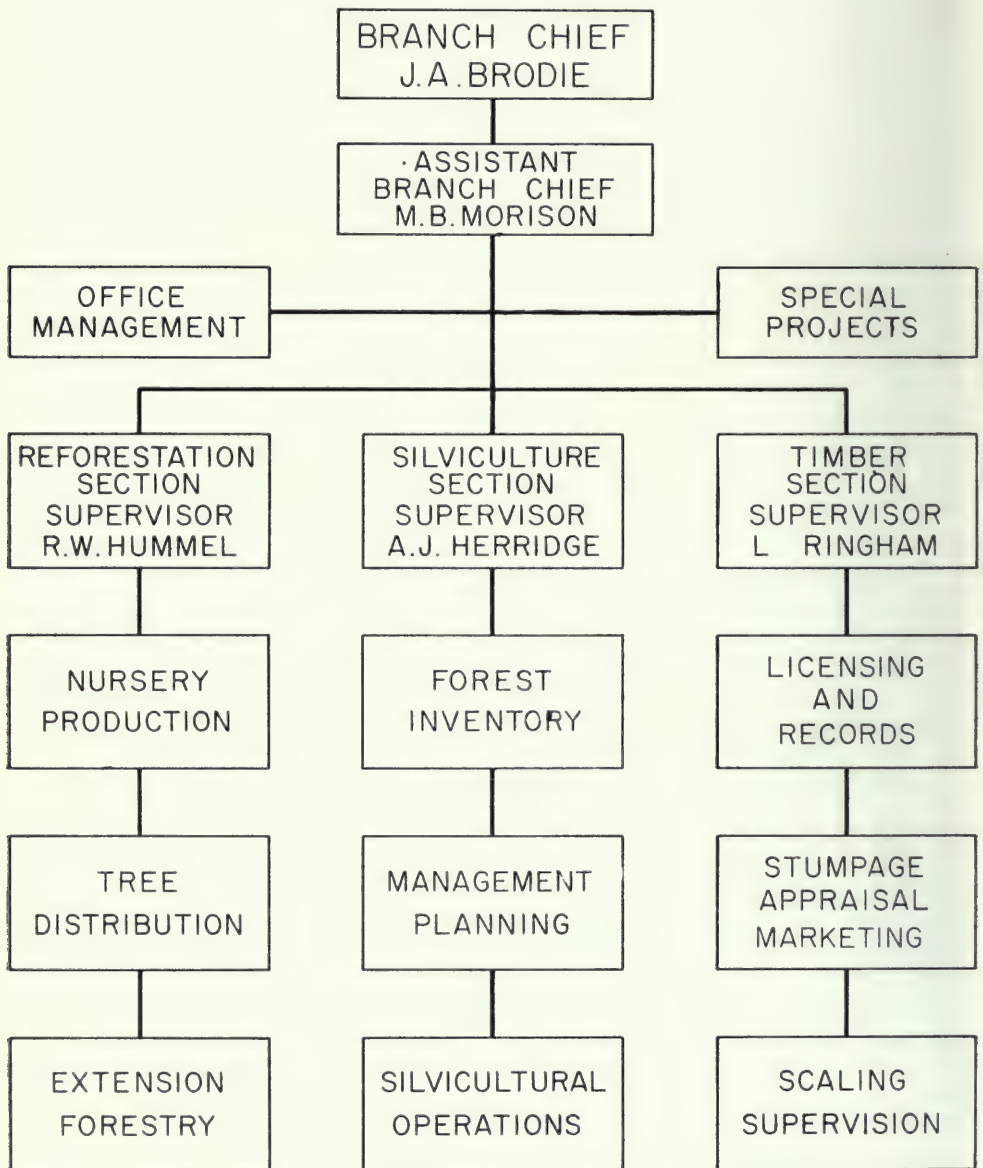
REFORESTATION SECTION

During the current fiscal year, a total of 43,767,916 units of nursery stock was furnished from 11 nurseries operated through the Reforestation Section. This is an increase of 573,053 over the number furnished during the previous fiscal year.

Tree seed was collected, processed, and sown and nursery operations continued to develop the output of nursery stock from the nurseries to approximately 60,000,000 units per annum in accordance with established targets.

The acreage of forest areas being managed for Counties, Townships, and Conservation Authorities under agreements entered into between the Minister and such corporations increased by 11,359. acres to a total of 167,522.20 acres.

TIMBER BRANCH



SUMMARY OF DISPOSITIONS OF NURSERY STOCK

April 1, 1962, to March 31, 1963

Planted on lands vested in Her Majesty in right of Ontario	29,091,021
Planted on County, Township, Conservation Authority and other lands managed by the Minister	4,867,430
Furnished in respect of Private Lands	9,597,300
Furnished for Educational and Scientific purposes	39,783
Miscellany: Department Exhibits, etc.	172,382
Stored at Planting Sites	
 Total	 <u>43,767,916</u>

NURSERY STOCK DISPOSITIONS

From April 1, 1953, to March 31, 1963

Year	Units
1953-54	23,447,860
1954-55	25,519,383
1955-56	28,351,483
1956-57	31,081,112
1957-58	25,854,262
1958-59	33,414,110
1959-60	41,682,125
1960-61	49,833,412
1961-62	43,194,863
1962-63	43,767,916

TREES FURNISHED IN RESPECT OF PRIVATE LAND

April 1, 1962, to March 31, 1963

County or Territorial District	Trees
Algoma	266,075
Brant	99,650
Bruce	94,800
Carleton	223,750
Cochrane	60,450
Dufferin	430,525
Dundas	39,600
Durham	240,750
Elgin	135,450
Essex	38,525
Frontenac	128,950
Glengarry	61,775
Grenville	169,000
Grey	352,675
Haldimand	58,075
Haliburton	114,950
Halton	153,150
Hastings	389,750
Huron	205,950
Kenora	42,950
Kent	33,875
Lambton	96,075
Lanark	146,225
Leeds	73,400
Lennox & Addington	107,975
Lincoln	53,050
Manitoulin	29,600
Middlesex	287,625
Muskoka	199,850
Nipissing	59,725
Norfolk	273,050
Northumberland	131,900
Ontario	459,625
Oxford	101,125
Parry Sound	280,225
Peel	503,725
Perth	64,000
Peterborough	120,700
Prescott	170,425
Prince Edward	24,075
Rainy River	92,800
Renfrew	391,550
Russell	5,200
Simcoe	616,525
Stormont	91,600
Sudbury	134,775
Thunder Bay	188,750
Timiskaming	14,600
Victoria	135,600
Waterloo	201,200
Welland	205,975
Wellington	197,650
Wentworth	205,350
York	592,675
Total	9,597,300

AGREEMENTS UNDER SECTION 2 OF THE FORESTRY ACT
(as of March 31, 1963)

	Date of Agreement	Number of Acres	
Conservation Authorities:			
Ausable River	Dec. 13, 1951	3,969.00	
Big Creek Region	Dec. 2, 1954	2,347.90	
Catfish Creek	Dec. 19, 1962	75.00	
Ganaraska River	Jan. 31, 1947	7,898.60	
Grand Valley	Mar. 18, 1952	5,083.06	
Maitland Valley	Apr. 1, 1955	466.00	
Metropolitan Toronto and Region	Apr. 11, 1951	1,672.00	
Moirs River	Nov. 28, 1951	11,426.00	
Napanee Valley	Oct. 28, 1954	5,669.00	
Neebing Valley	May 15, 1958	1,256.70	
North Grey Region	June 25, 1958	4,499.00	
Otter Creek	Apr. 26, 1957	1,094.00	
Sauble Valley	Sept. 23, 1959	1,580.00	
Saugeen Valley	Dec. 15, 1952	10,429.00	
South Nation River	Mar. 28, 1960	140.00	
Spencer Creek	Oct. 19, 1962	12.50	
Upper Thames River	Apr. 11, 1951	3,304.36	
			60,922.12
Counties:			
Brant	Nov. 15, 1952	50.00	
Bruce	Jan. 20, 1950	14,656.35	
Dufferin	Nov. 26, 1930	2,042.00	
Grey	Dec. 21, 1937	7,978.08	
Halton	Mar. 14, 1950	1,245.63	
Huron	Nov. 27, 1950	1,339.00	
Kent	Dec. 23, 1953	75.39	
Lanark	July 5, 1940	3,246.00	
Leeds and Grenville	Apr. 24, 1940	6,064.50	
Lennox and Addington	Apr. 3, 1952	1,186.00	
Middlesex	Mar. 8, 1954	569.50	
Northumberland and Durham	June 10, 1924	4,877.00	
Ontario	July 9, 1930	1,900.00	
Oxford	Sept. 1, 1950	716.56	
Prescott and Russell	Mar. 15, 1937	23,485.83	
Renfrew	Dec. 26, 1951	2,938.00	
Simcoe	June 19, 1925	17,446.69	
Stormont, Dundas and Glengarry	Sept. 29, 1949	2,048.45	
Victoria	Aug. 10, 1928	7,044.00	
Waterloo	Apr. 17, 1950	710.48	
Wentworth	Nov. 27, 1952	889.30	
York	Mar. 27, 1924	3,917.08	
			104,425.84
Townships:			
Bonfield	Apr. 1, 1952	60.00	
Charlottenburgh	Apr. 1, 1955	175.00	
Cumberland	May 29, 1952	808.44	
Galway and Cavendish	Nov. 1, 1952	100.00	
Marlborough	Sept. 21, 1953	200.00	
Torbolton	Mar. 28, 1953	430.80	
Williamsburgh	Oct. 19, 1962	400.00	
			2,174.24
TOTAL			167,522.20



Undisturbed stand of white pine in Port Arthur Forest District. Below: interior view of stand after thinning.



SILVICULTURE SECTION

Inventory Unit

Capital Air Surveys Ltd. completed vertical aerial photography of 15,417 square miles in the Districts of Cochrane and Kapuskasing. Unfavourable weather conditions prohibited the completion of this contract, leaving 1,182 square miles to be flown during the summer season of 1963. Hunting Survey Corporation Ltd. was awarded the contract for vertical aerial photography covering the Geraldton and Port Arthur Districts. This contractor satisfactorily completed 21,300 square miles and the remainder of the area will be photographed in 1963.

Field work was restricted to 736 square miles, comprising 121 square miles of Agreement Forests of the Southwestern Region and 615 square miles of abandoned licence in North Bay District. One field party was assigned to the North Bay area and two field parties completed the ground sampling on the balance of the Agreement Forests. The properties cruised are as follows: The County Forests of Ontario, York, Dufferin, Middlesex, Kent, Halton, Wentworth, Waterloo, Brant, Oxford, Huron, Bruce and Grey; The Conservation Authority Forests of Metropolitan Toronto and Region, Grand River, Upper Thames, Big Creek, Otter Creek, Middle Maitland and the Ausable River. These parties also covered the scattered Crown lands of this area, including the nursery properties at St. Williams.

Photo-interpretation was completed for 736 square miles which represents the area of field work as noted above. Forest stand maps and forest ledgers were completed for 3,666 square miles. These covered the Crown Management Units of New Liskeard, Wanapitei, Onaping, Sudbury, Tyson Lake, Trout Lake and Burwash. Included are the Conservation Authority Forests of the South Nation, Napanee, Moira and Ganaraska, the County Forests of Leeds and Grenville, Lanark, Lennox and Addington, Northumberland and Durham, Victoria and Simcoe, the township forests of Marlborough, Torbolton and Galway and various Crown properties at Kemptville, Orono and Midhurst. Work proceeded on revision of the planimetric base maps for those areas covered by the 1961 photography.

A composite report of the forest resources of Ontario was completed and made available for distribution. This report summarizes the forest surveys carried out between 1946 and 1959 by the Department of Lands and Forests and by those licensees who were required by Statute to supply an inventory of the timber resources on their licensed areas.

A publication has been prepared on the photographic interpretation of tree species in Ontario. This work is to be used for training personnel on photo interpretation and also as a reference for experienced photo interpreters. The publication is unique in that the stereograms are original positives and therefore no loss of detail exists through the printing process. Each stereogram is hand mounted and at present 500 copies have been prepared. The remaining 500 copies are to be completed during 1963.

The multiplex machine was used to interpret contours and form lines and prepare plans for the Parks Branch. Under this programme, plans were completed for the Killarney Area, 153 square miles with 50' contour intervals, Flack Lake Provincial Park 72 square miles at a scale of 1" = 100 feet, Killarney Area $\times 1$ with 10' and 20' contour intervals, Killarney Area $\times 2$ with 10' and 20' contour intervals and Killarney Area $\times 5$ with 25' contour intervals.

The use of planimetric and forestry maps remained at a high level. The photo-processing staff produced 64,823 contact prints; 3,644 photo mosaics at a scale

of 1" = 1 mile, 99 at a scale of 2" = 1 mile and 747 at a scale of 4" = 1 mile; 1602 enlargements; 91 film diapositives, 11 multiplex plates and 595 Kelsh plates; 1,468 copy negatives; 870 cronaflex prints; and developed 7 rolls of aerial film.

Silviculture Operations

Silvicultural Operations may be briefly described as the actions necessary to produce a merchantable crop.

The Department is concerned with ensuring a satisfactory merchantable crop on Crown lands dedicated to forestry. In addition, lands acquired by various Municipalities and Conservation Authorities, with the assistance of the Province, are put under agreement for management. These areas are called Agreement Forests. On these areas the Department contracts to produce suitable forest crops.

On existing forests, disturbances such as logging, fire, insects or diseases make it necessary to establish a new crop. Although satisfactory regeneration may develop naturally, artificial seeding or planting is often needed to establish the crop, and further work is needed to ensure its success. Natural seeding may be encouraged by scarification, to bare the mineral soil. Similarly, survival of desirable trees may be aided by destroying the competing brush.

In many cases the lands acquired for Agreement Forests were formerly under Agriculture. Such open lands are usually reforested by planting using suitable nursery stock.

After the stands are established, silvicultural treatment is needed. Undesirable competition may be destroyed or reduced by cutting, girdling or chemical treatment; trees of poor quality may be removed; thinning may be done; better trees may be pruned; and other operations may be needed to produce a high-quality forest.

Silvicultural Operations also include specialized techniques of harvesting to aid natural regeneration. The leaving of seed-trees to regenerate the cut area is one technique. Another harvesting technique is to cut the crop in strips, thus leaving some timber standing adjacent to cut areas to supply seed for regeneration and protection from sun and wind.

In addition to the above, the Silvicultural Operations unit co-operates with the Research Branch on the development of new equipment and techniques. New techniques and intensive forestry concepts are tested operationally to ascertain their feasibility for wider application.

During the 1962-63 fiscal year, 93,466 acres of forest were covered by various operations of a silvicultural nature. This acreage includes 52,384 acres planted, 2,713 acres seeded and 38,369 acres treated by other procedures.

Silvicultural Operations on Crown and Agreement Forest lands are divided into two main phases;

- A. Artificial Regeneration. This encompasses all seeding and planting projects.
- B. Stand Improvement. This includes all silvicultural and harvesting treatments except seeding and planting.

Below, under the two main phases, Artificial Regeneration and Stand Improvement, are summaries of the activities carried out in the year ending March 31, 1963.

Artificial Regeneration

The number of trees planted on Crown lands and Agreement Forests is slightly in excess of 1961-62. The total plantings in these categories for the past five years are as follows:

1958-59	—	20,190,338
1959-60	—	27,562,247
1960-61	—	35,630,393
1961-62	—	31,666,580
1962-63	—	33,958,451

Nursery targets, presently established, will allow an increase of several million trees in the annual programme in each of the next three or four years.

In addition to planting, 2,713 acres were artificially treated by seeding. Of this area, 1,352 acres were seeded from the ground and the remaining 1,361 acres were seeded from the air by helicopter.

Of the 2,713 acres, 604 acres were seeded following a burn without further site preparation and 220 acres were seeded following logging operations. The balance of 1,889 acres was seeded following some form of special site preparation.

This year marked the beginning of a series of aerial seeding trials to develop techniques of sowing various tree species by helicopter. A summary of the projects by districts is as follows:

AERIAL SEEDING, 1962-63

Location	Ground Treatment	Species	Acreage
Spring			
Gogama District Benneweis Twp.	Mechanical Scarification	jackpine	252
Geraldton District Legault Twp.	Natural Burn	jackpine	460
Fall			
Gogama District Benneweis Twp.	Mechanical Scarification	jackpine	235
Geraldton District Abitibi Limits — Camp 35	Logging Scarification	black spruce	220
Killala Lake	Natural Burn	jackpine	144
White River Twp. 52	Mechanical Scarification	black spruce	50
			<u>1,361</u>

TREES PLANTED ON CROWN LANDS

April 1, 1962, to March 31, 1963

Administrative District	Trees
Aylmer West	145,362
Chapleau	3,538,120
Cochrane	1,786,000
Fort Frances	1,204,100
Geraldton	1,851,785
Gogama	4,210,925
Hespeler	51,000
Kemptville	73,295
Kenora	369,900
Kapuskasing	1,216,275
Lindsay	489,700
Maple	263,293
North Bay	643,000
Parry Sound	545,165
Pembroke	1,207,022
Port Arthur	1,491,800
Sault Ste. Marie	3,828,956
Sioux Lookout	141,200
Sudbury	1,890,525
Swastika	2,246,795
Tweed	912,000
White River	905,500
Unclassified	79,303
Total	<u>29,091,021</u>

TREES PLANTED ON AGREEMENT FORESTS

April 1, 1962, to March 31, 1963

County:	Trees	
Brant -----	500	
Bruce -----	19,500	
Dufferin -----	12,600	
Grey -----	69,480	
Halton -----	21,650	
Huron -----	31,100	
Lanark -----	118,750	
Leeds and Grenville -----	152,000	
Lennox and Addington -----	114,000	
Middlesex -----	30,500	
Northumberland and Durham -----	172,000	
Ontario -----	3,500	
Oxford -----	10,000	
Prescott and Russell -----	315,800	
Renfrew -----	283,000	
Simcoe -----	349,400	
Stormont, Dundas and Glengarry -----	78,000	
Victoria -----	185,000	
Waterloo -----	11,500	
Wentworth -----	12,000	
York -----	38,500	
		2,028,780
Township:		
Marlborough -----	90,550	
Torbolton -----	62,000	
		152,550
Conservation Authority:		
Ausable River -----	442,500	
Big Creek -----	115,300	
Catfish Creek -----	32,500	
Central Lake Ontario -----	69,000	
Ganaraska River -----	343,000	
Grand Valley -----	250,300	
Maitland Valley -----	8,400	
Metropolitan Toronto and Region -----	67,000	
Moira River -----	217,000	
Napanee Valley -----	30,000	
Neebing Valley -----	40,000	
North Grey Region -----	172,170	
Otter Creek -----	1,000	
Saugeen Valley -----	115,850	
South Nation River -----	21,000	
Upper Thames River -----	40,000	
		1,965,020
Canada:		
National Capital Commission -----	721,080	721,080
TOTAL: -----		4,867,430

Stand Improvement

During the 1962-63 fiscal year, 129 regular Stand Improvement projects on Crown lands were carried out on a gross area of 30,618 acres. These projects were designed either to secure adequate regeneration following cutting operations or to improve the growth or quality of young timber stands.

In addition, four regeneration surveys and nine assessment surveys were conducted under the regular programme.

Junior Rangers were used in 14 projects involving 1,024 acres of Crown land; also, inmates of the Department of Reform Institutions camp in the Sault Ste. Marie area were used in four projects involving 24 acres of Crown land.

The summary of Stand Improvement work completed during the year 1962-63, by Districts and by type of treatments, showing gross area treated, follows:

STAND IMPROVEMENT PROGRAMME, 1962-63 Work (Acres) Carried Out by Districts on Crown Lands

District	Treatment	Regular Programme	Junior Rangers	Dept. Reform Institutions	Total
Fort Frances	One regeneration survey ----				
Kenora	Scarification — cone scattering -----	70			70
	Brush control — ground ----	53			53
	Thinning -----	46			46
	Prescribed burning -----	11			11
	Total	180			180
Sioux Lookout	Scarification — cone scattering -----	28			28
Port Arthur	Cleaning -----		4		4
	Modified cutting -----	711			711
	Scarification, seeding, cone scattering -----	73			73
	Prescribed burning -----	55			55
	Thinning -----	255			255
	One assessment survey -----				
	Total	1094	4		1098
Geraldton	Scarification and cone scattering -----	196			196
	Cleaning -----	305	5		310
	One assessment survey -----				
	Total	501	5		506
White River	Cone scattering -----		70		70
	Scarification -----	43			43
	Scarification, cone scattering and seeding -----	567			567
	Total	610	70		680
Chapleau	Cleaning -----	1500	260		1760
	One regeneration survey ----				
	One assessment survey -----				
	Total	1500	260		1760

District	Treatment	Regular Programme	Junior Rangers	Dept. Reform Institutions	Total
Gogama	Aerial spraying -----	750			750
	Cleaning -----	1002			1002
	Total	1752			1752
S. S. Marie	Modified cutting -----	273			273
	Scarification -----	179			179
	Cleaning -----	229	22		251
	Thinning -----	97	118		215
	Pruning -----	296	9	14	319
	Marking -----	1518			1518
	Cutting -----	499		10	509
	Two regeneration surveys --				
	Three assessment surveys --				
	Total	3091	149	24	3264
Sudbury	Scarification and some seeding	25			25
	Cleaning -----	337	12		349
	Total	362	12		374
Kapuskaing	Modified cutting -----	84			84
	Aerial spraying -----	1,106			1,106
	Cleaning -----	499	104		603
	Site preparation -----	208			208
	One assessment survey -----				
	Total	1,897	104		2,001
Cochrane	Modified cutting -----	92			92
	Scarification and some seeding	152			152
	Cleaning -----	160	20		180
	Site preparation -----	267			267
	One assessment survey -----				
	Total	671	20		691
Swastika	Scarification and some seeding	30			30
	Aerial spraying -----	520			520
	Total	550			550
North Bay	Modified cutting -----	437			437
	Scarification -----	397			397
	Cleaning -----	20			20
	Thinning -----	360			360
	Marking -----	5,768			5,768
	Girdling -----	120			120
	Total	7,102			7,102
Parry Sound	Scarification -----	600			600
	Ground spraying -----	166			166
	Cleaning -----	864	300		1,164
	Pruning -----	120			120
	Cutting -----	524			524
	Total	2,274	300		2,574
Pembroke	Cleaning -----		100		100
	Pruning -----	64			64
	Cutting -----	35			35
	Girdling -----	296			296
	Total	395	100		495
Kemptonville	Marking -----	129			129
	Girdling -----	5			5
	Total	134			134

District	Treatment	Regular Programme	Junior Rangers	Dept. Reform Institutions	Total
Tweed	Modified cutting -----	60			60
	Scarification -----	65			65
	Cleaning -----	1025			1025
	Thinning -----	151			151
	Pruning -----	886			886
	Marking -----	50			50
	Cutting -----	173			173
	One assessment survey -----				
	Road construction — 2 miles -----				
	Total	2410			2410
Lindsay	Modified cut -----	165			165
	Scarification -----	500			500
	Thinning -----	924			924
	Pruning -----	1388			1388
	Cutting -----	208			208
	Girdling -----	2650			2650
	Road maintenance — ¼ mile -----				
	Total	5835			5835
Lake Simcoe	Modified cutting -----	2			2
	Pruning -----	230			230
	Total	232			232
GRAND TOTALS	(Stand Improvement — Crown Lands) -----	30,618	1024	24	31,666

SUMMARY BY TREATMENTS, 1962-63
Stand Improvement Programme (Acres of Crown Lands)

Treatment	Regular Programme	Junior Rangers	Dept. Reform Institutions	Total
Modified cutting -----	1,824			1,824
Scarification -----	1,784			1,784
Scarification, cone scattering and some seeding --	1,141			1,141
Prescribed burning -----	66			66
Aerial spraying -----	2,376			2,376
Ground spraying -----	219			219
Cleaning -----	5,941	827		6,768
Thinning -----	1,833	118		1,951
Pruning -----	2,984	9	14	3,007
Marking -----	7,465			7,465
Cutting -----	1,439		10	1,449
Girdling, etc. -----	3,071			3,071
Site preparation -----	475			475
Cone scattering -----		70		70
Totals -----	30,618	1,024	24	31,666
Regeneration surveys	4 projects			
Assessment surveys	9 projects			
Plot establishment	1 project			
Camp maintenance	2 projects			
Road construction	2¼ miles			

ARGEEMENTS FORESTS, 1962-63

Stand Improvement projects consisting primarily of improvement cutting, girdling of cull hardwoods, and conifer thinning and pruning were carried out on a total of 5,884 acres in Agreement Forests. In addition to this regular programme, inmates of the Department of Reform Institutions conducted stand improvement work on 174 acres of Agreement Forest in the Lake Simcoe District.

Agreement Forests in general are located close to markets. This favorable situation allows the production and marketing of many forest products which often cannot be economically produced from the usually less accessible areas of Crown lands. Hence saleable products resulted from the regular Stand Improvement programmes on 1739 acres. No product was obtained from operations on the remaining 4,145 acres.

Some products are available from normal harvesting, although as yet most of these forests do not have the older age-classes suitable for harvesting.

NURSERY FORESTS, 1962-63

Summary by Treatment (Acres)

In conjunction with the four tree nurseries located in Southern Ontario, there are approximately 6,000 acres designated for growing timber. The Stand Improvement work is carried out mainly during the winter months, when activity in nursery stock production is at a minimum. Projects were as follows:

Treatment	Lake Erie District St. Williams Nursery	Lake Simcoe District Midhurst Nursery	Lindsay District Orono Nursery	Kemptville District Kemptville Nursery	Total
Site Preparation -----	30	3	—	15	48
Thinning -----	320	—	15	—	335
Improvement cutting -----	3	—	—	44	47
Girdling -----	111	—	—	—	111
Pruning -----	—	84	20	—	104
Total -----	464	87	35	59	645

AGREEMENT FORESTS, 1962-63
Work Carried Out by Districts (Acres)

District	Treatment	Regular Programme	Dept. Reform Institutions	Total
Lake Erie	Site preparation -----	215		215
	Girdling -----	40		40
	Display tree culture -----	19		19
	Improvement cutting -----	55		55
	Total	329		329
Lake Huron	Girdling -----	825		825
	Pruning -----	157		157
	Display tree culture -----	53		53
	Harvest and salvage cutting --	205		205
	Improvement cutting -----	155		155
	Thinning -----	5		5
	Total	1,400		1,400
Lake Simcoe	Site preparation -----	9	15	24
	Girdling -----	75		75
	Pruning -----	1,173	12	1,185
	Display tree culture -----	25		25
	Harvest and salvage cutting --	6		6
	Improvement cutting -----	93	147	240
	Thinning -----	390		390
	Total	1,771	174	1,945
Lindsay	Site preparation -----	79		79
	Girdling -----	389		389
	Pruning -----	288		288
	Display tree culture -----	40		40
	Thinning -----	150		150
	Total	946		946
Tweed	Girdling -----	32		32
Pembroke	Girdling -----	102		102
Kemptville	Girdling -----	123		123
	Pruning -----	548		548
	Harvest and salvage cutting --	215		215
	Improvement cutting -----	360		360
	Thinning -----	58		58
	Total	1,304		1,304
GRAND TOTAL (Agreement Forests) -----		5,884	174	6,058

AGREEMENT FORESTS, 1962-63
Summary by Treatment (Acres)

Treatment	Regular Programme	Dept. Reform Institutions	Total
Site preparation -----	303	15	318
Girdling (some spraying) -----	1,586		1,586
Pruning -----	2,166	12	2,178
Display tree culture -----	137		137
Harvest and salvage cutting -----	426		426
Improvement cutting -----	663	147	810
Thinning -----	603		603
Total	5,884	174	6,058

Forest Management Planning, March 31, 1963

The revision of management plans for Crown units has followed closely the re-inventory of Crown lands, now in progress.

Within 18 months of the completion of the re-inventory of a management unit the revised management plan is prepared by the district staff. The plan is drawn for a 20-year period and will be revised at 20-year intervals thereafter, on the basis of new inventories at that time and on experience gained in the past periods. The basic planning considers management objectives and the means of their attainment over a period of a hundred years, more or less. This planning is based on such considerations as the arrangement of species and age-classes on the productive forest land, a permanent road network, division of the forest into accessible compartments, the rotations of the working groups, et cetera. This planning constitutes a framework into which ten-year operating plans are fitted as time passes. The operating plans show, in detail, the stands to be cut, regenerated, and tended, the roads to be built, and the improvements to be made.

This type of planning is standard for Crown management units and Agreement Forests for which plans are prepared by Department staff. The main essentials of planning are contained in the Manual of Management Plan Requirements, May 1962, as a guide for the staff of the companies in the preparation of management plans for Company management units.

There are 203 management units in the Province, each operating under a plan of its own. This number is subject to change due to abandonment and acquisition of licences, and to division and consolidation of management units.

MANAGEMENT PLANS

1. *Crown Management Units* — plans prepared by Department staff. There are 79 management units with a total area of 85,216 square miles and with 78 plans in force, as follows:

- 61 — initial management plans;
- 17 — plans in preparation;
- 1 — plan not yet due.

2. *Company Management Units* — plans prepared by licensees. Seventy-seven management units are on record, with 97,342 square miles, as follows:

- 67 — units with approved management plans;
- 8 — plans in preparation;
- 2 — plans not yet due.

3. *Agreement Forests* — Plans prepared by Department staff. There are 42 management units with an approximate area of 244 square miles. Inventory for 12 management units has been completed and turned over to the Districts, where the work has commenced on planning. The division of these forests into compartments has been completed.

4. *Nursery Forests* — plans prepared by Department staff. Management plans for these five small management units, adjacent to the Departmental tree nurseries, will be prepared on completion of inventory programme.

Other work during the fiscal year was as follows:

1. Co-operation in programming the Timber Certificate Course, and lecturing on management procedures.

2. A four-hour lecture on implementation of management plan given at the Forest Ranger School, within the general course curriculum.
3. A seminar given at the Forestry Faculty, University of Toronto, on Forest Production and Productivity for the Diploma Course in Resource Management.
4. Close liaison and co-operation with Fish and Wildlife Branch in the improvement of wildlife habitat by timber operations.
5. Examination of forest access road proposals regarding their conformity to the management plan.

TIMBER SECTION

The volume of wood cut from Crown Land during the year ending March 31, 1962, was approximately 325.6 million cubic feet, a drop of 25.1 million cubic feet from the year before. This decrease, which also represents a drop of nearly \$886,000 in stumpage revenue, was due almost entirely to a slump in spruce lumber production. There are indications that the saw-timber cut during 1962-63 will be more nearly normal.

The volume of all species of pulpwood cut in Ontario remained at almost the same level as for the year previous. In addition, the trend to increased utilization of sawmill and veneer mill residues continued in 1962 with 36 mills producing the pulp chip equivalent of 242,629 roundwood cords. This represents an increase of 11.7 per cent over the previous year, and there are already indications that more mills will be installing chippers and more pulp mills will be buying chips in 1963.

MARKET STUDIES

During 1962, a Directory of Primary Wood-Using Industries for Ontario was published and distributed to forest products wholesalers and secondary wood-using industries both in Canada and the United States. In addition, the program of studying the forest industry potential in various locations throughout Ontario was continued and a close liaison has been maintained with the Department of Economics and Development.

FOREST ACCESS ROADS—CONSTRUCTED UNDER FEDERAL-PROVINCIAL AGREEMENT

Under this agreement, the costs of constructing forest access roads, for the protection and management of Crown forest lands and the transportation of forest products from those lands, were shared by the Federal and Provincial governments. During the fiscal year ending March 31st, 1963, 74 miles of new construction were completed and 18 miles of existing roads were improved. The locations of these roads are as follows:

District	Management Unit	Name of Road	New Construction Miles	Existing Rd. Improved Miles
Chapleau	Abitibi Missinaibi	Lloyd Twp. #1 --		2
	Abitibi Missinaibi	Lloyd Twp. #2 --	5½	
	Abitibi Missinaibi	Mill Yard By-pass--	2	
	Missinaibi	Racine-Floranna---		7
Fort Frances	Rainy Lake	*Wassaw-Boffin ---	5½	
Geraldton	Longlac	Kowkash -----		5
Gogama	Timmins	Kemp-Sothman ---	4½	
Kenora	Kenora	*Gordon Lake ----	3	
Lindsay	Gooderham	Hinden -----	2½	1
North Bay	Nipissing	Henry-Crerar ----	5½	
Pembroke	Petawawa	*Pretty Lake ----	4	
Sault Ste. Marie	Kirkwood	Franklin Lake ---	1½	
	Huron Forest Products	Mount Lake -----	9	
	Blind River	Scarfe Block -----	2	
Swastika	Englehart	*Davidson -----	5	
Tweed	Madawaska	Black Donald ----	10	
	Madawaska	Green Lake -----	1	3
	York	Watt Lake -----	13	
Total			74	18

* Capital Fund Roads, summarized below.

Under the Capital Road programme for 1962-63 17½ miles of road were constructed on parts of four roads into areas of unalienated Crown lands containing mature and over-mature timber.

Total miles of road constructed to date under this fund:

Fort Frances — Rainy Lake Management Unit	5½ miles
Kapuskasing — Hearst Management Unit	14½ "
Kenora — Kenora Management Unit	11 "
Pembroke — Petawawa Management Unit	76 "
Swastika — Englehart Management Unit	56 "
	163 "
Kenora — Jones Road (part of cost)	22 "
	185 "

Note:—Funds for the maintenance of forest access roads are provided by the Lands and Surveys Branch.

To date, \$934,278.79 has been spent on Capital Fund road construction, all of which has been paid back to the Fund from additional stumpage charges collected from the forest operators using these roads.

AGREEMENT FOREST TIMBER SALES, 1962-63

During 1962-63, the value of timber and forest products from County, Township and Conservation Authority Forests totalled \$91,611.04. The sale of pulpwood, produced as plantation thinnings, accounted for a high proportion of this amount.

CROWN TIMBER SALES — 1962-63

Crown Timber Sales C.T.A. 2 (1) 57	49.20 square miles
* Crown Timber Sales C.T.A. 3 (1) 70	21,505.89 " "
Crown Timber Sales C.T.A. 5 (1) 4	17.70 " "

ABANDONMENTS

In the Fiscal year, 1962-63, licensed areas in the amount of 23,552.73 square miles were abandoned.

* This area represents the larger licences expiring under Sections 2 & 3 of The Crown Timber Act and being re-issued under Section 3 of the Act.

SUMMARY OF AREA UNDER CROWN TIMBER LICENCE CLASSIFIED IN ACCORDANCE WITH THE CROWN TIMBER ACT AS OF MARCH 31, 1963

Year	Licences under Section 2	Licences under Section 3	Licences under Section 5	Total Area Square Mileage
1958-59	4,520.62	99,612.16	199.90	104,332.68
1959-60	4,206.22	99,818.60	186.98	104,211.80
1960-61	3,647.71	99,103.39	137.79	102,888.89
1961-62	3,563.07	99,347.87	154.26	103,065.20
1962-63	3,102.08	97,830.82	152.36	101,085.26

SUMMARY OF VOLUME AND VALUE OF WOOD CUT BY SPECIES, 1961-62

Species	Cubic Feet	Stumpage Value
Softwood		
Balsam -----	12,316,205.54	\$ 266,789.40
Cedar -----	341,422.41	9,733.99
Hemlock -----	2,428,979.39	63,185.56
Pine, Jack -----	70,903,250.24	1,956,968.40
Pine, Red -----	5,291,374.72	299,672.82
Pine, White -----	17,605,643.26	985,218.32
Spruce -----	178,063,932.99	6,634,954.10
Tamarack -----	36,235.54	857.18
Christmas Trees -----	1,338.00	192.94
Fuelwood -----	905,323.95	6,772.68
	287,893,706.04	10,224,345.39
Hardwood		
Ash -----	65,561.83	\$ 2,405.53
Basswood -----	359,071.01	21,502.03
Beech -----	175,032.01	3,393.89
Birch, White -----	1,754,195.20	26,922.97
Birch, Yellow -----	6,925,046.49	512,334.49
Butternut -----	2,234.58	91.15
Cherry -----	20,555.33	679.63
Elm -----	273,536.34	10,102.06
Maple -----	5,212,999.29	198,452.17
Oak -----	207,532.58	9,674.13
Poplar -----	21,525,735.63	210,039.88
Fuelwood -----	1,185,829.05	8,737.46
	37,707,329.34	\$ 1,004,335.39
Total all species -----	325,601,035.38	\$11,228,680.78

Note: Value of export levy not included in above figures

LICENSING OF MILLS

During 1962 the trend to fewer but larger sawmills which has been evident since the early 1950's continued. The mills licensed during the year under The Crown Timber Act were as follows:

Sawmills	Daily Capacity in excess of 50,000 fbm -----	31
	Daily Capacity 10,000 fbm to 50,000 fbm -----	129
	Daily Capacity less than 10,000 fbm -----	774
Specialty Mills (lath, pickets, ties, shingles, staves, headings & hoops) -		76
Veneer Mills -----		24
Pulp Mills -----		27

SCALING

Scaling examinations during the past year were held at the following locations on the dates noted:

Forest Ranger School, Dorset, Ontario----	April	13th, 1962
Forest Ranger School, Dorset, Ontario----	May	18th, 1962
Atikokan, Ontario -----	September	28th, 1962

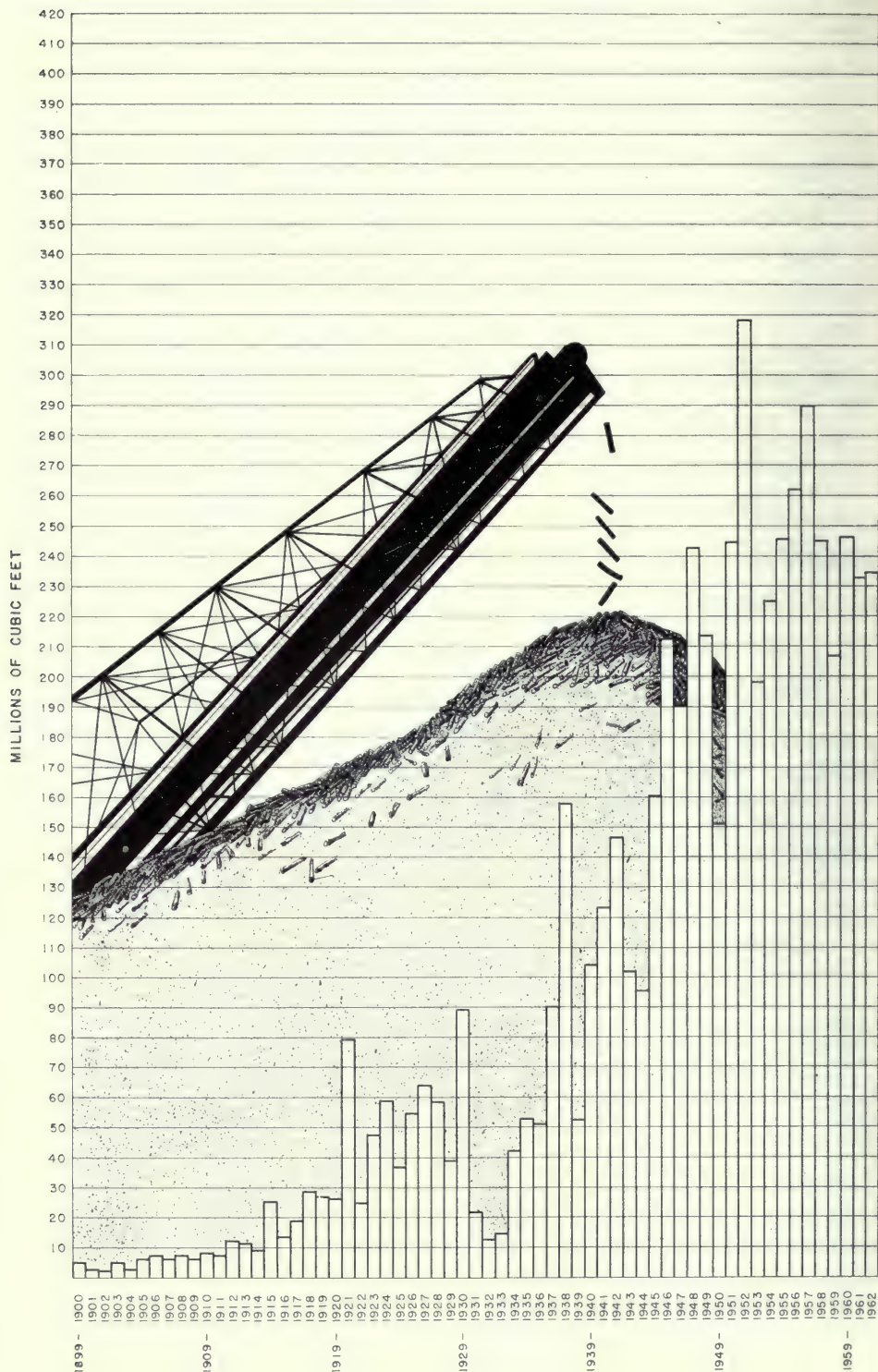
NUMBER OF LICENCES ISSUED

To scale all Classes of Timber -----	1337
To scale Pulpwood Only -----	215

During 1962, tests were commenced in the Sault Ste. Marie District to determine the adaptability of a digital computing system to scaling returns. The results of these tests warranted an expansion of the test program to include six districts during the 1963-64 season.

In co-operation with the Research Branch and the Marathon Corporation of Canada Ltd., further studies were made concerning scaling by standing tree measurement.

PULPWOOD TIMBER—ALL SPECIES
CUT ON CROWN LAND



Elm	177,641	21,317.00	21,317.00	127.90	1,151.12	1,279.02
Hemlock	02	29.81	29.81	49	1.00	1.49
Maple	66,895	8,092.35	8,092.35	50.61	436.27	486.88
Oak	114,333	13,720.00	13,720.00	82.32	740.88	823.20
Pine, jack	2,360,550	13,592,234.31	13,592,234.31	309,052.60	160,634.95	469,687.55
Pine, red	47,599	337,494.64	337,494.64	11,137.23	7,032.10	18,169.33
Pine, white	195,595	629,740.26	629,740.26	20,781.41	23,233.67	44,015.08
Poplar	307,643	1,314,909.05	1,314,909.05	7,860.25	9,255.04	17,115.29
Spruce	2,740,753	13,676,537.07	13,676,537.07	450,768.33	116,872.50	567,640.83
Tamarack	784	1,421.38	1,421.38	23.15	2.97	26.12
Total sawlogs (cubic measure)	6,223,096	30,000,703.87	30,000,703.87	805,337.80	327,539.96	1,132,877.76

Boom Timber, Piling, Poles

Boom and Dimension Timber						
Balsam	134	778.86	778.86	13.58	29.41	42.99
Birch, white	125	320.43	320.43	1.92	4.48	6.40
Cedar	1,538	26,836.11	26,836.11	489.62	33.33	522.95
Hemlock	1,359	33,009.47	33,009.47	1,672.30	30.04	1,702.34
Maple	12	70.10	70.10	4.21		4.21
Pine, jack	1,654	5,705.42	5,705.42	138.13	85.92	224.05
Pine, red	629	10,601.00	10,601.00	546.97	130.26	677.23
Pine, white	1,433	16,300.08	16,300.08	654.58	550.95	1,205.53
Poplar	1,005	5,174.77	5,174.77	110.77	54.41	165.18
Spruce	9,173	230,095.29	230,095.29	9,541.93	1,504.98	11,046.91
Tamarack	80	138.55	138.55	2.28	.90	3.18
Piling						
Maple	11	234.13	234.13	10.80	7.02	17.82
Pine, jack	498	7,502.45	7,502.45	176.56	6.27	182.83
Poplar	32	1,033.56	1,033.56	58.07	20.67	78.74
Spruce	2,978	79,624.75	79,624.75	3,861.86	318.43	4,180.29
Poles						
Birch, white	47	949.41	949.41	44.51		44.51
Cedar	5,734	60,368.21	60,368.21	2,291.45	256.46	2,547.91
Hemlock	2,222	47,725.40	47,725.40	2,292.46	111.47	2,403.93
Pine, jack	31,170	515,391.54	515,391.54	22,127.60	5,152.98	27,280.58
Pine, red	18,234	408,180.99	408,180.99	20,327.69	26,656.66	46,984.35
Pine, white	68	1,717.38	1,717.38	88.54	19.15	107.69
Spruce	1,625	22,454.59	22,454.59	956.27	426.55	1,382.82
Tamarack	02	15.00	15.00	.90		.90
Total booms, piling, poles	79,763	1,474,227.49	1,474,227.49	65,413.00	35,400.34	100,813.34
Total cubic foot measure	6,308,859	31,474,931.36	31,474,931.36	870,750.80	362,940.30	1,233,691.10

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
					\$	\$	\$
Cordage							
Pulpwood							
Ash		168.47		14,319.95	84.24	45.46	129.70
Balsam		139,985.00		11,898,725.00	195,690.15	54,791.38	250,481.53
Balsam (export levy)	(	1,723.55)		(146,501.75)		1,723.55	1,723.55
Basswood		40.17		3,414.45	20.09	9.63	29.72
Beech		851.53		72,380.05	425.77	232.55	658.32
Birch, white		13,930.90		1,184,126.50	6,968.89	4,983.47	11,952.36
Cedar		58.62		4,982.70	82.06	15.76	97.82
Elm		341.05		28,989.25	170.53	74.35	244.88
Hemlock		1,847.83		157,065.55	2,586.97		2,586.97
Maple		3,715.88		315,849.80	1,857.96		2,701.12
Oak		116.39		9,893.15	58.19	26.73	84.92
Pine, jack		544,966.96		46,322,191.60	1,087,527.24	74,341.63	1,161,868.87
Pine, jack (export levy)	(	35,977.71)		(3,058,105.35)		17,989.19	17,989.19
Pine, red		820.46		69,739.10	1,148.64	1,864.31	3,012.95
Pine, white		2,801.48		238,125.80	3,922.07	2,801.68	6,723.75
Poplar		205,895.13		17,501,086.05	102,947.86	50,604.37	153,552.23
Poplar (export levy)	(	6,882.15)		(584,982.75)		688.22	688.22
Spruce		1,834,494.79		155,932,057.15	5,115,670.41	627,654.37	5,743,324.78
Spruce (export levy)	(	47,759.24)		(4,059,535.40)		47,759.24	47,759.24
Tamarack		346.26		29,432.10	484.76	152.74	637.50
Tamarack (export levy)	(	11.64)		(989.40)		11.64	11.64
Total pulpwood		2,750,380.92		233,782,378.20	6,519,645.83	886,613.43	7,406,259.26
Fuelwood							
Hardwood		13,950.93		1,185,829.05	6,975.50	1,761.96	8,737.46
Softwood		10,650.87		905,323.95	5,925.43	1,447.25	6,772.68
Total fuelwood		24,601.80		2,091,153.00	12,800.93	3,209.21	15,510.14
Bolts							
Birch, white		379.35		32,244.75	189.69	512.44	702.13
Poplar		12,109.48		1,029,305.80	6,054.77	5,260.33	11,315.10
Poplar (export levy)	(	843.73)		(71,717.05)		84.37	84.37
Total bolts		12,488.83		1,061,550.55	6,244.46	5,857.14	12,101.60
Total cordage		2,787,471.55		236,935,081.75	6,538,191.22	895,679.78	7,433,871.00

Miscellaneous

Posts — lin. ft.

Balsam	199	1,716	858.00	17.16	17.16
Cedar	35,701	269,474	134,737.00	2,664.16	3,542.45
Pine, jack	1,119	11,698	5,849.00	116.98	184.48
Pine, red	548	4,384	2,192.00	43.84	162.70
Pine, white	12	180	90.00	1.80	9.00
Poplar	631	4,728	2,364.00	47.28	47.28
Spruce	713	7,476	3,738.00	74.76	137.68

Car Stakes — cu. ft.

Spruce	850	1,122.41	1,122.41	36.99	44.83
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Mining Timber — cu. ft.

Balsam	27	40.71	40.71	.67	.69
Birch, white	1,115	11,562.55	11,562.55	68.02	136.04
Pine, jack	47,936	157,149.04	157,149.04	3,697.47	4,390.41
Poplar	17,026	3,405.20	3,405.20	170.26	170.26
Spruce	75,907	105,797.17	105,797.17	4,792.34	5,276.19
Tamarack	256	715.42	715.42	22.63	22.63

Tie-blocks — cu. ft.

Pine, jack	35,782	193,633.24	193,633.24	4,556.01	4,808.77
Christmas trees	2,676		1,338.00	192.94	192.94

Total miscellaneous

Total Ontario scale	220,498	302,582.842	624,591.74	16,503.31	19,143.51
Total Doyle rule	7,071,624	56,557,540.53	56,557,540.53	1,349,314.52	2,609,875.76
Total cubic foot measure	545	35,560	8,890.00	177.81	355.62
Total cordage	6,308,859	31,474,931.36	31,474,931.36	870,750.80	1,233,691.10
Grand total	13,601,526	2,787,471.55	236,935,081.75	6,538,191.22	7,433,871.00
		2,787,471.55	325,601,035.38	8,774,937.66	11,296,936.99

Number of permits issued and included in above —

Conversion factor — Ontario scale to cubic foot measure — 4,534

Conversion factor — cordage to cubic foot measure — 85

794,305.16

CHAPLEAU

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Pine, jack	84,287		2,952,379	551,846.54	11,809.52	1,476.19	13,285.71
Pine, red	238		24,723	4,621.12	123.62	111.25	234.87
Pine, white	44,063		3,968,073	741,695.89	19,840.38	18,299.69	38,140.07
Spruce	3,539		134,298	25,102.43	537.19	289.31	826.50
Total Ontario scale	132,127		7,079,473	1,323,265.98	32,310.71	20,176.44	52,487.15
Cubic Foot Measure							
Sawlogs							
Balsam	3,931		19,703.89	19,703.89	325.12	247.17	572.29
Birch, white	1,084		5,386.52	5,386.52	32.32	15.50	47.82
Pine, jack	897,568		4,757,395.35	4,757,395.35	101,466.49	22,754.81	124,221.30
Pine, white	537		11,591.61	11,591.61	382.52	312.97	695.49
Poplar	40,425		234,137.82	234,137.82	1,402.84	776.99	2,179.83
Spruce	458,490		2,085,573.18	2,085,573.18	68,499.72	23,049.08	91,848.80
Total sawlogs	1,402,035		7,113,788.37	7,113,788.37	172,109.01	47,156.52	219,265.53
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Pine, jack	22		237.70	237.70	8.91	2.38	11.29
Spruce	84		1,770.60	1,770.60	84.07	17.71	101.78

Poles		33	116.49	116.49	3.50	2.32	5.82
Cedar	903	16,677.64	16,677.64	748.18	6.50		754.68
Pine, jack	1,042	18,802.43	18,802.43	844.66	28.91		873.57
Total boom timber, piling, poles	1,403,077	7,132,590.80	7,132,590.80	172,953.67	47,185.43		220,139.10
Total cubic foot measure							
Cordage							
Pulpwood							
Balsam	204.80	17,408.00	286.72	1.54			288.26
Pine, jack	34,651.37	2,945,366.45	67,768.63	493.72			68,262.35
Poplar	13,895.50	1,181,117.50	6,947.76	874.69			7,822.45
Spruce	33,128.75	2,815,943.75	92,732.80	2,696.97			95,429.77
Total pulpwood	81,880.42	6,959,835.70	167,735.91	4,066.92			171,802.83
Fuelwood							
Hardwood	395.50	33,617.50	197.75	173.25			371.00
Softwood	259.50	22,057.50	129.75	135.75			265.50
Total fuelwood	655.00	55,675.00	327.50	309.00			636.50
Total cordage		7,015,510.70	168,063.41	4,375.92			172,439.33
Total Ontario scale	132,127	1,323,265.98	32,310.71	20,176.44			52,487.15
Total cubic foot measure	1,403,077	7,132,590.80	172,953.67	47,185.43			220,139.10
Grand total	1,535,204	15,471,367.48	373,327.79	71,737.79			445,065.58
Number of permits issued and included in above —			122				3,533.38
Conversion factor — Ontario scale to cubic foot measure —			5.35				
Conversion factor — cordage to cubic foot measure —			85				

COCHRANE

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Balsam	69		1,597	298.50	6.39	4.79	11.18
Birch, white	749		19,803	3,701.50	29.71	26.21	55.92
Cedar	490		28,508	5,328.60	85.52		85.52
Pine, jack	225,977		4,838,806	904,449.72	19,355.23	15,477.75	34,832.98
Pine, red	11		677	126.54	3.39	2.71	6.10
Pine, white	2,281		363,659	67,973.64	1,818.31	2,426.34	4,244.65
Poplar	38,567		1,093,029	204,304.49	1,639.53	578.36	2,217.89
Spruce	157,534		1,876,459	350,740.00	7,505.83	5,818.65	13,324.48
Tamarack	885		4,892	914.39	14.69	14.46	29.15
Total Ontario scale	426,563		8,227,430	1,537,837.38	30,458.60	24,349.27	54,807.87
Cubic Foot Measure							
Sawlogs							
Balsam	128		1,307.93	1,307.93	21.56	10.64	32.20
Cedar	26		444.80	444.80	7.32		7.32
Pine, jack	122,611		595,154.08	595,154.08	13,986.14	7,991.77	21,977.91
Pine, red	4		120.01	120.01	3.96	1.92	5.88
Poplar	750		3,569.14	3,569.14	21.41	21.42	42.83
Spruce	72,075		321,214.40	321,214.40	10,502.19	3,045.88	13,548.07
Tamarack	98		417.25	417.25	6.68		6.68
Total sawlogs	195,692		922,227.61	922,227.61	24,549.26	11,071.63	35,620.89
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Spruce	486		15,257.64	15,257.64	504.01	73.45	577.46
Piling							
Pine, jack	209		3,322.34	3,322.34	78.18	3.91	82.09
Poles							
Pine, jack	241		3,150.32	3,150.32	93.94	61.59	155.53
Spruce	89		2,333.94	2,333.94	77.02	77.74	154.76
Total boom timber, piling, poles	1,025		24,064.24	24,064.24	753.15	216.69	969.84
Total cubic foot measure	196,717		946,291.85	946,291.85	25,302.41	11,288.32	36,590.73

Cordage

Pulpwood

Ash	13.93	1,184.05	6.97	4.88	11.85
Balsam	15,814.38	1,344,222.30	22,140.13	4,481.68	26,621.81
Birch, white	913.21	77,622.85	456.62	112.37	568.99
Elm	16.28	1,383.80	8.14	5.70	13.84
Pine, jack	29,901.23	2,541,604.55	59,802.46	3,726.89	63,529.35
Poplar	5,075.77	431,440.45	2,537.90	1,552.36	4,090.26
Spruce	309,112.48	26,274,560.80	865,500.50	127,533.40	993,033.90
Tamarack	11.26	957.10	15.76	.58	16.34
Total pulpwood	360,858.54	30,672,975.90	950,468.48	137,417.86	1,087,886.34

Fuelwood

Hardwood	1,722.77	146,435.45	861.40	81.45	942.85
Softwood	1,247.42	106,030.70	623.72	136.98	760.70
Total fuelwood	2,970.19	252,466.15	1,485.12	218.43	1,703.55

Bolts

Birch, white	10.86	923.10	5.43	5.43	10.86
Poplar	1,042.20	88,587.00	521.11	521.10	1,042.21
Poplar (export levy)	(843.73)	(71,717.05)		84.37	84.37
Total bolts	1,053.06	89,510.10	526.54	610.90	1,137.44
Total cordage	364,881.79	31,014,952.15	952,480.14	138,247.19	1,090,727.33

Miscellaneous

Posts — lin. ft.	1,950				
Cedar	87	13,653	6,826.50	136.53	136.53
Pine, jack		690	345.00	6.90	6.90
Mining Timber — cu. ft.					
Birch, white	456	3,648.20	21.46	21.46	42.92
Pine, jack	654	2,474.77	58.22	2.91	61.13
Spruce	1,831	4,540.16	149.55	29.38	178.93
Christmas trees	626		37.94		37.94
Total miscellaneous	5,604	18,147.63	410.60	53.75	464.35
Total Ontario scale	426,563	1,537,837.38	30,458.60	24,349.27	54,807.87
Total cubic foot measure	196,717	946,291.85	25,802.41	11,288.32	36,590.73
Total cordage		31,014,952.15	952,480.14	138,247.19	1,090,727.33
Grand total	628,884	33,517,229.01	1,008,651.75	173,988.53	1,182,590.28

Number of permits issued and included in above — 478

Conversion factor — Ontario scale to cubic foot measure — 5.35

Conversion factor — cordage to cubic foot measure — 85

FORT FRANCES
SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Balsam	1,307		28,565	5,339.25	114.25	12.54	126.79
Cedar	610		10,652	1,991.03	31.95	30.15	62.10
Pine, jack	934,919		8,982,063	1,678,890.28	35,928.24	2,977.03	38,905.27
Pine, red	4,307		219,246	40,980.56	1,096.25	967.08	2,063.33
Pine, white	2,104		184,125	34,415.89	920.65	625.36	1,546.01
Poplar	980		53,906	10,075.89	80.86	4.40	85.26
Spruce	251,232		5,534,428	1,034,472.52	22,137.72	8,500.15	30,637.87
Total Ontario scale	1,195,459		15,012,985	2,806,165.42	60,309.92	13,116.71	73,426.63
Doyle Rule							
Pine, red	254		14,979	3,744.75	74.90	74.90	149.80
Pine, white	291		20,581	5,145.25	102.91	102.91	205.82
Total Doyle rule	545		35,560	8,890.00	177.81	177.81	355.62
Cubic Foot Measure							
Sawlogs							
Balsam	41		467.61	467.61	7.70	11.00	18.70
Cedar	120		1,133.33	1,133.33	18.70	38.13	56.83
Pine, jack	847		26,567.80	26,567.80	624.34	453.24	1,077.58
Pine, red	419		5,051.79	5,051.79	166.70	203.07	369.77
Pine, white	451		4,866.92	4,866.92	160.60	180.08	340.68
Poplar	156		1,358.85	1,358.85	8.13	47.82	55.95
Spruce	1,445		4,145.56	4,145.56	136.81	72.76	209.57
Total sawlogs	3,479		43,591.86	43,591.86	1,122.98	1,006.10	2,129.08
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Spruce	119		3,436.50	3,436.50	187.14	15.16	202.30

Poles						
Cedar	81	616.28	616.28	20.55		20.55
Pine, jack	194	3,902.35	3,902.35	177.89		177.89
Pine, red	196	2,797.70	2,797.70	120.84	24.60	145.44
Pine, white	7	111.22	111.22	4.45	1.11	5.56
Total boom timber, piling, poles	597	10,864.05	10,864.05	510.87	40.87	551.74
Total cubic foot measure	4,076	54,455.91	54,455.91	1,633.85	1,046.97	2,680.82

Cordage						
Pulpwood						
Balsam						
Cedar	6,626.55		563,256.75	9,277.14	1,840.78	11,117.92
	2.89		245.65	4.04	3.18	7.22
Pine, jack	49,982.13		4,248,481.05	99,964.25	9,319.83	109,284.08
Pine, jack (export levy)	(35,976.76)		(3,058,024.60)		17,988.71	17,988.71
Poplar	25,215.56		2,143,322.60	12,607.82	4,163.15	16,770.37
Poplar (export levy)	(6,007.56)		(510,642.60)		600.76	600.76
Spruce	68,593.97		5,830,487.45	192,063.12	26,895.24	218,958.36
Total pulpwood	150,421.10		12,785,793.50	313,916.37	60,811.65	374,728.02

Fuelwood						
Hardwood	207.01		17,595.85	103.50	22.05	125.55
Softwood	120.77		10,265.45	60.39	7.00	67.39
Total fuelwood	327.78		27,861.30	163.89	29.05	192.94
Total cordage	150,748.88		12,813,654.80	314,080.26	60,840.70	374,920.96

Miscellaneous						
Posts — lin. ft.						
Cedar	1,885		7,006.00	109.54	7.20	116.74
Christmas trees	1,250		625.00	62.50		62.50
Total miscellaneous	3,135		7,631.00	172.04	7.20	179.24
Total Ontario scale	1,195,459	15,012,985	2,806,165.42	60,309.92	13,116.71	73,426.63
Total Doyle rule	545	35,560	8,890.00	177.81	177.81	355.62
Total cubic foot measure	4,076	54,455.91	54,455.91	1,633.85	1,046.97	2,680.82
Total cordage		150,748.88	12,813,654.80	314,080.26	60,840.70	374,920.96
Grand total	1,203,215	150,748.88	15,690,797.13	376,373.88	75,189.39	451,563.27

Number of permits issued and included in above — 196
Conversion factor — Ontario scale to cubic foot measure — 5.35
Conversion factor — cordage to cubic foot measure — 85

GERALDTON
SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Cubic Foot Measure					\$	\$	\$
Sawlogs							
Balsam	6,120		64,247.17	64,247.17	1,059.02	229.30	1,288.32
Cedar	49		430.37	430.37	7.08		7.08
Pine, jack	25,099		223,512.32	223,512.32	5,230.82	429.67	5,660.49
Poplar	16,846		66,574.09	66,574.09	391.62		391.62
Spruce	136,273		1,491,874.10	1,491,874.10	49,144.09	2,318.46	51,462.55
Total sawlogs	184,387		1,846,638.05	1,846,638.05	55,832.63	2,977.43	58,810.06
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Balsam	54		38.97	38.97	.63	.21	.84
Cedar	1,483		25,545.41	25,545.41	420.75	30.05	450.80
Pine, jack	99		388.35	388.35	9.14	.46	9.60
Spruce	4,488		105,839.53	105,839.53	3,490.07	189.50	3,679.57
Piling							
Pine, jack	289		4,180.11	4,180.11	98.38	2.36	100.74
Spruce	1,032		29,186.86	29,186.86	1,202.49	3.14	1,205.63
Poles							
Cedar	94		1,439.51	1,439.51	61.13		61.13
Pine, jack	1,601		31,257.77	31,257.77	738.65	38.91	777.56
Spruce	61		1,726.72	1,726.72	56.87	3.10	59.97
Total boom timber, piling, poles	9,201		199,603.23	199,603.23	6,078.11	267.73	6,345.84
Total cubic foot measure	193,588		2,046,241.28	2,046,241.28	61,910.74	3,245.16	65,155.90
Cordage							
Pulpwood							
Balsam	36,787.06			3,126,900.10	51,212.54	12,082.03	63,294.57
Birch, white	1,130.51			96,098.35	565.26	2.87	568.13

Cedar	7.41	629.85	10.37	10.37	
Pine, jack	124,881.62	10,614,937.70	248,909.38	260,161.40	
Pine, red	29.45	2,503.25	41.23	41.23	
Pine, white	2.65	225.25	3.71	3.71	
Poplar	71,932.68	6,114,277.80	35,966.36	1,061.78	37,028.14
Spruce	346,566.78	29,458,176.30	960,211.34	70,035.76	1,030,247.10
Tamarack	29.69	2,523.65	41.56		41.56
Total pulpwood	581,367.85	49,416,267.25	1,296,961.75	94,434.46	1,391,396.21
Fuelwood					
Softwood	1,508.75	128,243.75	754.35	25.01	779.36
Total fuelwood	1,508.75	128,243.75	754.35	25.01	779.36
Bolts					
Birch, white	15.24	1,295.40	7.62	3.81	11.43
Poplar	5,017.72	426,506.20	2,508.86	1,254.43	3,763.29
Total bolts	5,032.96	427,801.60	2,516.48	1,258.24	3,774.72
Total cordage	587,909.56	49,972,312.60	1,300,232.58	95,717.71	1,395,950.29
Miscellaneous					
Posts — lin. ft.					
Cedar	254	2,382	1,191.00	23.82	38.56
Car-Stakes — cu. ft.					
Spruce	77	102.63	102.63	3.39	4.03
Mining Timber					
Spruce	1,541	9,426.93	9,426.93	310.55	310.55
Christmas trees	250		125.00	15.00	15.00
Total miscellaneous	2,122	10,845.56	352.76	15.38	368.14
Total cubic foot measure	193,588	2,046,241.28	61,910.74	3,245.16	65,155.90
Total cordage	587,909.56	49,972,312.60	1,300,232.58	95,717.71	1,395,950.29
Grand total	195,710	52,029,399.44	1,362,496.08	98,978.25	1,461,474.33
Number of permits issued and included in above —					1,617.49
Conversion factor — cordage to cubic foot measure —					85

GOGAMA

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Balsam	203		4,437	829.34	17.74		24.81
Birch, white	224		5,916	1,105.79	8.87	7.07	17.74
Cedar	10,410		297,563	55,619.25	892.69	.80	893.49
Pine, jack	724,039		19,290,182	3,605,641.50	77,160.74	4,599.70	81,760.44
Pine, red	31,367		1,680,037	314,025.61	8,400.20	7,270.04	15,670.24
Pine, white	28,834		3,091,337	577,820.00	15,456.72	14,152.14	29,608.86
Poplar	5,833		217,755	40,701.87	326.63	329.33	655.96
Spruce	314,911		6,367,458	1,190,179.07	25,469.83	19,102.38	44,572.21
Total Ontario scale	1,115,821		30,954,685	5,785,922.43	127,733.42	45,470.33	173,203.75
Cubic Foot Measure							
Sawlogs							
Balsam	268		1,383.13		22.78	6.51	29.29
Pine, jack	76,561		450,004.82		10,535.14	5,114.48	15,649.62
Poplar	18,555		139,034.41		831.85	119.16	951.01
Spruce	222,824		1,479,928.94		48,832.43	4,064.57	52,897.00
Total sawlogs	318,208		2,070,351.30		60,222.20	9,304.72	69,526.92
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Spruce	2		20.28		.81		.81
Poles							
Pine, jack	406		8,852.46		425.39	72.26	497.65
Total boom timber, piling, poles	408		8,872.74		426.20	72.26	498.46
Total cubic foot measure	318,615		2,079,224.04		60,548.40	9,376.98	70,025.38

Cordage					
Pulpwood					
Balsam	819.07	69,620.95	1,146.71	75.55	1,222.26
Birch, white	153.24	13,025.40	76.62		76.62
Pine, jack	30,450.96	2,588,331.60	60,884.86	1,146.84	62,031.70
Poplar	761.45	64,723.25	380.73	76.15	456.88
Poplar (export levy)	(874.51)	(74,333.35)		87.45	87.45
Spruce	24,341.20	2,069,002.00	68,155.37	2,912.91	71,068.28
Total pulpwood	56,525.92	4,804,703.20	130,644.29	4,298.90	134,943.19
Fuelwood					
Hardwood	1,196.50	101,702.50	598.25	35.00	633.25
Softwood	367.00	31,195.00	183.50	144.00	327.50
Total fuelwood	1,563.50	132,897.50	781.75	179.00	960.75
Total cordage	58,089.42	4,937,600.70	131,426.04	4,477.90	135,903.94
Miscellaneous					
Posts — lin. ft.					
Cedar	15	180	90.00	1.80	1.80
Mining Timber — cu. ft.					
Birch, white	659	7,914.35	46.56	46.56	93.12
Pine, jack	45,150	148,852.67	3,502.42	490.17	3,992.59
Spruce	4,934	13,163.53	433.61	54.20	487.81
Total miscellaneous	50,758	170,020.55	3,984.39	590.93	4,575.32
Total Ontario scale	1,115,821	5,785,922.43	127,733.42	45,470.33	173,203.75
Total cubic foot measure	318,616	2,079,224.04	60,648.40	9,376.98	70,025.38
Total cordage		4,937,600.70	131,426.04	4,477.90	135,903.94
Grand total	1,485,195	12,972,767.72	328,792.25	59,916.14	383,708.39
Number of permits issued and included in above —					
				49	1,494.05
Conversion factor — Ontario scale to cubic foot measure —					
				5.35	
Conversion factor — cordage to cubic foot measure —					
				85	

KAPUSKASING

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Balsam	22		306	57.20	1.22	.97	2.19
Pine, jack	726		26,732	4,996.64	106.93	120.29	227.22
Pine, white	65		4,958	926.73	24.79	24.10	47.10
Poplar	3,833		149,849	28,009.16	224.77	307.19	531.96
Spruce	178,006		3,200,465	598,217.76	12,801.86	16,301.46	29,103.32
Total Ontario scale	182,652		3,382,310	632,207.49	13,159.57	16,752.22	29,911.79
Cubic Foot Measure							
Sawlogs							
Balsam	38,080		163,870.07	163,870.07	2,703.50	4,368.93	7,072.43
Birch, white	376		2,570.38	2,570.38	15.19	6.55	21.74
Cedar	4		25.50	25.50	.42		.42
Pine, jack	227,946		1,268,584.68	1,268,584.68	29,811.77	25,134.85	54,946.62
Poplar	42,435		341,256.49	341,256.49	2,031.65	1,666.58	3,698.23
Spruce	1,377,953		6,075,373.44	6,075,373.44	200,478.12	56,306.06	256,784.18
Tamarack	616		847.45	847.45	13.96		13.96
Total sawlogs	1,687,410		7,852,528.01	7,852,528.01	235,054.61	87,482.97	322,537.58
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Pine, jack	3		43.58	43.58	1.74		1.74
Poplar	59		1,665.74	1,665.74	89.72		89.72
Spruce	789		22,953.77	22,953.77	1,245.26		1,245.26
Tamarack	80		138.55	138.55	2.28	.90	3.18
Piling							
Spruce	1,009		26,559.92	26,559.92	1,386.25		1,386.25
Poles							
Cedar	47		949.41	949.41	44.51		44.51
Pine, jack	22		453.54	453.54	18.59	4.53	23.12
Total boom timber, piling, poles	2,009		52,764.51	52,764.51	2,788.35	5.43	2,793.78
Total cubic foot measure	1,689,419		7,905,292.52	7,905,292.52	237,842.96	87,488.40	325,331.36

Cordage

Pulpwood

Balsam	19,610.76	1,666,914.60	27,455.06	10,160.93	37,615.99
Balsam (export levy)	(1,477.54)	(125,590.90)		1,477.54	1,477.54
Birch, white	597.16	50,758.60	298.58	2.41	300.99
Cedar	24.02	2,041.70	33.63	2.40	36.03
Pine, jack	2,797.88	237,819.80	5,595.76	279.85	5,875.61
Pine, jack (export levy)	(.95)	(80.75)		.48	.48
Poplar	7,737.54	657,690.90	3,868.80	2,818.05	6,686.85
Poplar (export levy)	(.08)	(6.80)		.01	.01
Spruce	342,873.02	29,144,206.70	960,049.88	158,350.18	1,118,400.06
Spruce (export levy)	(41,276.11)	(3,508,469.35)		41,276.11	41,276.11
Tamarack	29.64	2,519.40	41.50	54.62	96.12
Tamarack (export levy)	(11.64)	(989.40)		11.64	11.64
Total pulpwood	373,670.02	31,761,951.70	997,943.21	214,434.22	1,211,777.43

Fuelwood

Hardwood	85.46	7,264.10	42.73		42.73
Softwood	2,507.04	213,098.40	1,253.52	57.78	1,311.30
Total fuelwood	2,592.50	220,362.50	1,296.25	57.78	1,354.03
Total cordage	376,262.52	31,982,314.20	998,639.46	214,492.00	1,213,131.46

Miscellaneous

Posts — lin. ft.					
Cedar	3,452	24,789	12,394.50	247.89	247.89
Mining Timber — cu. ft.					
Balsam	27	40.71	40.71	.67	.69
Spruce	3,079	4,528.84	4,528.84	149.18	154.51
Total miscellaneous	6,558	16,964.05	397.74	5.35	403.09
Total Ontario scale	182,652	632,207.49	13,159.57	16,752.22	29,911.79
Total cubic foot measure	1,689,419	7,905,292.52	237,842.96	87,488.40	325,331.36
Total cordage		31,982,314.20	998,639.46	214,492.00	1,213,131.46
Grand total	1,878,629	40,536,778.26	1,250,039.73	318,737.97	1,568,777.70

Number of permits issued and included in above —

258,385.33

Conversion factor — Ontario scale to cubic foot measure —

5.35

Conversion factor — cordage to cubic foot measure —

85

KEMPTVILLE

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Cubic Foot Measure					\$	\$	\$
Sawlogs							
Ash	55,408		6,649.00	6,649.00	39.89	359.05	398.94
Basswood	82,291		9,875.00	9,875.00	59.25	434.50	498.75
Birch, white	7,917		950.00	950.00	5.70	41.80	47.50
Elm	177,641		21,317.00	21,317.00	127.90	1,151.12	1,279.02
Maple	66,691		8,003.00	8,003.00	48.02	432.16	480.18
Oak	114,383		13,720.00	13,720.00	82.32	740.88	823.20
Pine, white	142,500		17,100.00	17,100.00	564.30	718.20	1,282.50
Poplar	110,175		13,221.00	13,221.00	79.33	581.72	661.05
Spruce	2,083		250.00	250.00	8.25		8.25
Total sawlogs	759,039		91,085.00	91,085.00	1,014.96	4,459.43	5,474.39
Total cubic foot measure	759,039		91,085.00	91,085.00	1,014.96	4,459.43	5,474.39
Cordage							
Pulpwood							
Poplar		313.48		26,645.80	156.75	4,837.90	4,994.65
Spruce		3.19		271.15	8.93	59.93	68.86
Total pulpwood		316.67		26,916.95	165.68	4,897.83	5,063.51
Total cordage		316.67		26,916.95	165.68	4,897.83	5,063.51
Total cubic foot measure			91,085.00	91,085.00	1,014.96	4,459.43	5,474.39
Grand total	759,039	316.67		118,001.95	1,180.64	9,357.26	10,537.90
Number of permits issued and included in above—					Nil		Nil
Conversion factor—cordage to cubic foot measure—					85		

KENORA

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Cedar	3,150		62,881	11,753.46	188.64	251.53	440.17
Pine, red	5,740		116,136	21,707.66	580.69	915.84	1,496.53
Pine, white	2,907		107,035	20,006.54	535.18	849.64	1,384.82
Spruce	146		4,800	897.20	19.20	40.80	60.00
Total Ontario scale	11,943		290,852	54,364.86	1,323.71	2,057.81	3,381.52
Cubic Foot Measure							
Sawlogs							
Balsam	3		19.00	19.00	.31	.07	.38
Pine, jack	92,447		459,672.91	459,672.91	10,802.32	3,733.10	14,535.42
Pine, red	8,330		69,283.33	69,283.33	2,286.34	1,809.13	4,095.47
Pine, white	670		6,860.21	6,860.21	226.38	127.48	353.86
Poplar	6,134		32,544.81	32,544.81	195.27	117.78	313.05
Spruce	34,635		234,722.55	234,722.55	7,745.85	2,760.87	10,506.72
Total sawlogs	142,219		803,102.81	803,102.81	21,256.47	8,548.43	29,804.90
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Spruce	332		12,391.66	12,391.66	714.59	59.14	773.73
Poles							
Cedar	1,888		19,261.08	19,261.08	756.06	149.36	905.42
Pine, jack	612		7,111.50	7,111.50	281.60	135.50	417.10
Pine, red	377		7,581.67	7,581.67	374.69	163.78	538.47
Pine, white	8		267.80	267.80	15.27	15.27	275.32
Spruce	313		4,841.18	4,841.18	222.37	52.95	275.32
Total boom timber, piling, poles	3,530		51,454.89	51,454.89	2,364.58	560.73	2,925.31
Total cubic foot measure	145,749		854,557.70	854,557.70	23,621.05	9,109.16	32,780.21

Continued on page 330

KENORA

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Cordage					\$	\$	\$
Pulpwood							
Balsam		3,561.01		302,685.85	4,985.97	1,961.06	6,947.03
Birch, white		104.05		8,844.25	52.03	10.41	62.44
Pine, jack		109,555.34		9,312,203.90	219,109.04	31,171.53	250,280.57
Poplar		852.42		72,455.70	426.21	213.10	639.31
Spruce		184,040.93		15,643,479.05	515,314.71	57,713.00	573,027.71
Total pulpwood		298,113.75		25,339,668.75	739,887.96	91,069.10	830,957.06
Fuelwood							
Hardwood		105.71		8,985.35	52.86	19.60	72.46
Softwood		244.80		20,808.00	122.40	65.23	187.63
Total fuelwood		350.51		29,793.35	175.26	84.83	260.09
Total cordage		298,464.26		25,369,462.10	740,063.22	91,153.93	831,217.15
Miscellaneous							
Posts—lin. ft.							
Cedar	7,153		55,887	27,943.50	558.87	95.68	654.55
Pine, jack	357		3,058	1,529.00	30.58		30.58
Pine red	265		2,120	1,060.00	21.20		21.20
Poplar	616		4,608	2,304.00	46.08		46.08
Tie Blocks—cu. ft.							
Pine, jack	460		2,203.89	2,203.89	51.79	27.55	79.34
Christmas trees	50			25.00	5.00		5.00
Total miscellaneous	8,901		—	35,065.39	713.52	123.23	836.75
Total Ontario scale	11,943		290,852	54,364.86	1,323.71	2,057.81	3,381.52
Total cubic foot measure	145,749		854,557.70	854,557.70	23,621.05	9,109.16	32,730.21
Total cordage		298,464.26		25,369,462.10	740,063.22	91,153.93	831,217.15
Grand total	166,593	298,464.26	—	26,313,450.05	785,721.50	102,444.13	888,165.63

Number of permits issued and included in above — 331

Conversion factor—Ontario scale to cubic foot measure — 5.35

Conversion factor—cordage to cubic foot measure — 85

111,623.19

LINDSAY

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent In Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure					\$	\$	\$
Ontario Scale							
Ash	569		34,378	6,425.79	171.92	62.12	234.04
Balsam	2,119		47,296	8,840.37	189.20	138.48	327.68
Basswood	6,497		435,207	81,347.10	2,176.08	1,569.40	3,745.48
Beech	2,397		156,662	29,282.62	235.01	390.92	625.93
Birch, white	1,801		75,543	14,120.19	113.31	191.00	304.31
Birch, yellow	14,196		1,198,119	223,947.48	5,990.63	8,329.50	14,320.13
Cedar	589		15,344	2,868.04	46.04	43.12	89.16
Cherry	135		9,871	1,845.05	49.36	9.87	59.23
Elm	2,888		301,211	56,301.12	1,506.08	390.83	1,896.91
Hemlock	30,941		2,188,035	408,978.50	6,564.12	2,426.90	8,991.02
Maple	39,123		3,669,883	685,959.44	18,349.46	5,725.39	24,075.45
Oak	2,247		126,035	23,557.94	630.19	335.03	965.22
Pine, red	6,848		313,571	58,611.40	1,567.88	2,730.57	4,298.45
Pine, white	22,806		1,630,929	304,846.54	8,154.69	13,575.19	21,729.88
Poplar	9,405		436,784	81,641.87	655.20	1,243.24	1,898.44
Spruce	9,756		533,043	99,634.21	2,132.18	2,427.75	4,559.93
Tamarack	10		134	25.05	.40	3.48	3.88
Total Ontario scale	152,327		11,172,045	2,088,232.71	48,531.75	39,593.39	88,125.14
Cubic Foot Measure							
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Hemlock	609		15,250.39	15,250.89	774.23		774.23
Pine, white	30		587.31	587.31	27.26	17.62	44.88
Spruce	111		2,762.29	2,762.29	138.43	27.62	166.05
Total Boom timber, piling, poles	750		18,600.49	18,600.49	939.92	45.24	985.16
Total cubic foot measure	750		18,600.49	18,600.49	939.92	45.24	985.16

Continued on page 332

LINDSAY

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Cordage					\$	\$	\$
Pulpwood		27.52		2,339.20	38.53	30.53	69.06
Balsam		2.63		223.55	1.32	.66	1.98
Basswood		87.62		7,447.70	43.81	10.66	54.47
Beech		62.60		5,321.00	31.30	8.01	39.31
Birch, white		107.21		9,112.85	53.61	23.05	76.66
Elm		880.63		74,853.55	440.32	164.03	604.35
Maple		1,207.47		102,634.95	603.74	152.77	756.51
Poplar							
Total pulpwood		2,375.68		201,932.80	1,212.63	389.71	1,602.34
Fuelwood							
Hardwood		320.97		27,282.45	160.49	60.71	221.20
Total fuelwood		320.97		27,282.45	160.49	60.71	221.20
Total cordage		2,696.65		229,215.25	1,373.12	450.42	1,823.54
Miscellaneous							
Posts — lin. ft.							
Cedar	1,585		12,678	6,339.00	126.78	12.88	139.66
Total miscellaneous	1,585		12,678	6,339.00	126.78	12.88	139.66
Total Ontario scale	152,327		11,172,045	2,088,232.71	48,531.75	39,593.39	88,125.14
Total cubic foot measure	750		18,600.49	18,600.49	939.92	45.24	985.16
Total cordage		2,696.65		229,215.25	1,373.12	450.42	1,823.54
Grand total	154,662	2,696.65	—	2,342,387.45	50,971.57	40,101.93	91,073.50
Number of permits issued and included in above —							36
Conversion factor — Ontario scale to cubic foot measure —							5.35
Conversion factor — cordage to cubic foot measure —							85

MAPLE
SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Cordage					\$	\$	\$
Fuelwood							
Hardwood		28.00		2,380.00	14.00	14.00	28.00
Total fuelwood		28.00		2,380.00	14.00	14.00	28.00
Total cordage		28.00		2,380.00	14.00	14.00	28.00
Miscellaneous							
Posts — lin. ft.							
Pine, white	12		180	90.00	1.80	7.20	9.00
Total miscellaneous	12		180	90.00	1.80	7.20	9.00
Total cordage		28.00		2,380.00	14.00	14.00	28.00
Grand total	12	28.00	—	2,470.00	15.80	21.20	37.00
Number of permits issued and included in above—							5
Conversion factor—cordage to cubic foot measure —							85

NORTH BAY

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Ash	180		12,110	2,263.55	60.56	31.90	92.46
Balsam	446		10,098	1,887.48	40.40		89.05
Basswood	342		20,118	3,760.37	100.60	99.76	200.36
Beech	2		174	32.52	.26		.26
Birch, white	9,163		554,836	103,707.66	832.31	3,123.51	3,955.82
Birch, yellow	73,922		5,941,206	1,110,505.79	29,706.04	44,363.39	74,069.43
Cedar	80		3,488	651.96	10.46	2.76	13.22
Elm	481		49,385	9,230.84	246.94	81.68	328.62
Hemlock	5,558		349,422	65,312.52	1,048.27	526.96	1,575.23
Maple	9,648		710,080	132,725.23	3,550.42	1,335.88	4,886.30
Oak	541		34,959	6,534.39	174.81	211.37	386.18
Pine, jack	29,911		674,329	126,042.80	2,697.31	2,782.48	5,479.79
Pine, red	128,767		9,647,953	1,803,355.70	48,239.84	37,883.89	86,123.73
Pine, white	234,561		23,575,072	4,406,555.51	117,875.42	124,653.40	242,528.82
Poplar	10,605		654,469	122,330.65	832.47	350.19	1,182.66
Spruce	37,509		1,794,542	335,428.41	7,178.16	7,280.19	14,458.35
Tamarack	382		5,992	1,120.00	17.98	41.94	59.92
Total Ontario scale	542,098		44,038,233	8,231,445.38	212,612.25	222,817.95	456,430.20

Cubic Foot Measure							
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Cedar	06		110.04	110.04	5.13	1.10	6.23
Pine, red	34		581.26	581.26	28.50	5.81	34.31
Pine, white	16		186.18	186.18	7.63	1.86	9.49
Spruce	38		955.36	955.36	49.06	27.48	76.54
Piling							
Maple	11		234.13	234.13	10.80	7.02	17.82
Spruce	71		2,253.04	2,253.04	129.03	67.60	196.63
Poles							
Cedar	3,213		34,151.72	34,151.72	1,222.56	.57	1,223.13
Hemlock	22		549.95	549.95	28.08	5.50	33.68

Pine, jack	30	290.41	290.41	9.97	8.72	18.69
Pine, red	645	8,173.95	8,173.95	328.66	211.49	540.15
Pine, white	3	92.13	92.13	5.24	1.85	7.09
Spruce	228	2,038.13	2,038.13	79.89	61.15	141.04
Total boom timber, piling, poles	4,317	49,616.30	49,616.30	1,904.55	400.15	2,304.70
Total cubic foot measure	4,317	49,616.30	49,616.30	1,904.55	400.15	2,304.70
Cordage						
Pulpwood						
Ash		11.56	982.60	5.78	3.38	9.16
Balsam		233.71	19,865.35	327.19	128.54	455.73
Basswood		4.48	380.80	2.24		2.24
Birch, white		1,897.85	161,317.25	948.94	363.56	1,312.50
Maple		12.14	1,031.90	6.07		6.07
Pine, jack		390.27	33,172.95	780.54	72.83	853.37
Pine, red		2.96	251.60	4.14		4.14
Pine, white		313.56	26,652.60	438.98	178.72	617.70
Poplar		27,164.88	2,309,014.80	13,582.47	11,780.50	25,362.97
Spruce		5,022.88	426,944.80	14,064.07	1,684.68	15,748.75
Tamarack		13.92	1,183.20	19.48	15.03	34.51
Total pulpwood		35,068.21	2,980,797.85	30,179.90	14,227.24	44,407.14
Fuelwood						
Hardwood		1,155.55	98,221.75	577.77	538.78	1,116.55
Total fuelwood		1,155.55	98,221.75	577.77	538.78	1,116.55
Total cordage		36,223.76	3,079,019.60	30,757.67	14,766.02	45,523.69
Miscellaneous						
Posts — lin. ft.						
Cedar	4,259		31,591	315.91	169.11	485.02
Mining Timber — cu. ft.						
Pine, jack	2,132		5,821.60	136.83	199.86	336.69
Poplar	17,026		3,405.20	170.26		170.26
Spruce	144		385.61	12.71	.91	13.62
Total miscellaneous	23,561		25,407.91	635.71	369.88	1,005.59
Total Ontario scale	542,098		8,231,445.38	212,612.25	222,817.95	435,430.20
Total cubic foot measure	4,317		49,616.30	1,904.55	400.15	2,304.70
Total cordage		36,223.76	3,079,019.60	30,757.67	14,766.02	45,523.69
Grand total	569,976		11,385,489.19	245,910.18	238,354.00	484,264.18
Number of permits issued and included in above —						
				340	39,293.59	
Conversion factor — Ontario scale to cubic foot measure —				5.35		
Conversion factor — cordage to cubic foot measure —				85		

PARRY SOUND

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Ash	1,033		74,620	13,947.66	\$ 373.17	\$ 282.49	\$ 655.66
Balsam	315		8,015	1,498.13	32.06	14.93	46.99
Basswood	5,444		376,679	70,407.29	1,883.44	2,787.43	4,670.87
Beech	658		47,355	8,851.40	71.03	221.65	292.68
Birch, white	1,389		71,093	13,288.41	106.64	161.77	268.41
Birch, yellow	78,137		7,172,144	1,340,587.66	35,860.79	58,893.64	94,754.43
Cedar	271		7,071	1,321.68	21.21	7.40	28.61
Cherry	547		40,838	7,633.27	204.21	50.98	255.19
Elm	3,923		425,137	79,464.86	2,125.74	1,266.32	3,392.06
Hemlock	31,172		2,065,562	386,086.36	6,196.71	5,871.40	12,068.11
Maple	64,968		5,370,504	1,003,832.53	26,852.58	16,239.19	43,091.77
Oak	428		38,808	7,253.83	194.08	215.10	409.18
Pine, jack	80		917	171.40	3.66	.93	4.59
Pine, red	182		9,322	1,742.43	46.61	110.04	156.65
Pine, white	10,755		865,653	161,804.30	4,328.32	6,771.42	11,099.74
Poplar	737		28,463	5,320.19	42.69	93.44	136.13
Spruce	11,391		657,440	122,885.98	2,629.74	3,381.19	6,010.93
Tamarack	221		5,093	951.96	15.27	10.20	25.47
Total Ontario scale	211,651		17,264,714	3,227,049.34	80,987.95	96,379.52	177,367.47
Cubic Foot Measure							
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Balsam	76		700.44		11.55	28.80	40.35
Birch, white	125		320.43	320.43	1.92	4.48	6.40
Hemlock	62		1,344.64	1,344.64	80.68		80.68
Maple	12		70.10	70.10	4.21		4.21
Pine, jack	1,530		5,035.79	5,035.79	118.34	83.08	201.42
Pine, red	384		2,249.36	2,249.36	74.22	114.62	188.84
Pine, white	1,310		11,494.21	11,494.21	379.30	525.58	904.88
Poplar	946		3,509.03	3,509.03	21.05	54.41	75.46
Spruce	1,013		17,973.11	17,973.11	764.24	516.76	1,281.00

Piling	128	3,230.64	3,230.64	164.86	96.92	261.78
Spruce						
Poles	134	1,601.08	1,601.08	104.35		104.35
Cedar		15.00	15.00	.90		.90
Tamarack	2					
Total boom timber, piling, poles	5,722	47,543.83	47,543.83	1,725.62	1,424.65	3,150.27
Total cubic foot measure	5,722	47,543.83	47,543.83	1,725.62	1,424.65	3,150.27

Cordage

Pulpwood						
Balsam	1,027.70		87,354.50	1,438.78	102.77	1,541.55
Birch, white	838.09		71,237.65	419.04	419.05	838.09
Maple	770.66		65,506.10	385.33	192.67	578.00
Pine, jack	158.94		13,509.90	317.88	79.47	397.35
Poplar	5,703.38		484,787.30	2,851.68	2,722.65	5,574.33
Spruce	193.15		16,417.75	540.82	38.63	579.45
Total pulpwood	8,691.92		738,813.20	5,953.53	3,555.24	9,508.77

Fuelwood

Hardwood	2,115.40		179,809.00	1,057.70	112.33	1,170.03
Total fuelwood	2,115.40		179,809.00	1,057.70	112.33	1,170.03
Total cordage	10,807.32		918,622.20	7,011.23	3,667.57	10,678.80

Miscellaneous

Posts — lin. ft.						
Balsam	199	1,716	858.00	17.16		17.16
Cedar	1,347	9,992	4,996.00	99.92		99.92
Spruce	122	1,064	532.00	10.64		10.64
Total miscellaneous	1,668	12,772	6,386.00	127.72		127.72
Total Ontario scale	211,651	17,264.714	3,227,049.34	80,987.95	96,379.52	177,367.47
Total cubic foot measure	5,722	47,543.83	47,543.83	1,725.62	1,424.65	3,150.27
Total cordage	—	—	918,622.20	7,011.23	3,667.57	10,678.80
Grand total	219,041	—	4,199,601.37	89,852.52	101,471.74	191,324.26

Number of permits issued and included in above — 292
Conversion factor — Ontario scale to cubic foot measure — 5.35
Conversion factor — cordage to cubic foot measure — 85

PEMBROKE

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Ash	512		37,024	6,920.37	185.12		
Balsam	3,706		76,289	14,259.63	305.16	77.26	262.38
Basswood	1,652		116,351	21,747.85	581.77	216.65	521.81
Beech	819		58,124	10,864.30	87.19	500.78	1,082.55
Birch, white	9,591		429,540	80,287.85	644.33	122.28	209.47
Birch, yellow	107,999		9,267,363	1,732,217.38	46,336.86	690.71	1,335.04
Cedar	61		1,463	273.46	4.39	76,843.70	123,180.56
Cherry	796		55,246	10,326.36	276.25	4.17	8.56
Elm	1,412		179,432	33,538.69	897.19	55.46	331.71
Hemlock	74,715		5,561,646	1,039,560.00	16,684.94	183.68	1,080.87
Maple	96,059		8,083,417	1,510,919.07	40,417.11	7,901.48	24,586.42
Oak	387		24,568	4,591.21	122.83	10,203.87	50,620.98
Pine, jack	13,834		429,092	80,204.11	1,716.37	57.23	180.06
Pine, red	76,384		3,548,134	663,202.62	17,740.73	3,078.12	4,794.49
Pine, white	213,209		13,716,163	2,563,768.79	68,680.88	27,385.42	45,126.15
Poplar	31,806		1,484,570	277,489.72	2,226.85	121,974.56	190,555.44
Spruce	61,270		3,065,058	572,908.04	12,260.21	2,024.42	4,251.27
Tamarack	51		1,042	194.77	3.12	14,129.51	26,389.72
Total Ontario scale	694,263		46,134,517	8,623,274.22	209,071.30	2,88	6.00
						265,452.18	474,523.48
Cubic Foot Measure							
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Cedar	9		68.64	68.64	2.18	2.18	4.36
Hemlock	688		16,413.94	16,413.94	817.39	30.04	847.43
Spruce	207		6,992.41	6,992.41	397.50	309.84	707.34

PORT ARTHUR
SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues \$	Bonus \$	Stumpage Value \$
Board Foot Measure							
Ontario Scale							
Ash	7		440	82.24	2.20	.44	2.64
Balsam	864		22,726	4,247.85	90.91	39.78	130.69
Cedar	33		1,074	200.75	3.22	2.15	5.37
Pine, jack	10,234		229,604	42,916.64	918.42	803.62	1,722.04
Pine, red	1,058		76,810	14,357.01	384.06	384.81	768.87
Pine, white	1,914		199,533	37,295.89	997.68	1,334.50	2,332.18
Poplar	3,415		139,334	26,043.74	209.00	58.52	267.52
Spruce	2,025		103,687	19,330.75	414.75	414.75	829.50
Total Ontario scale	19,550		773,208	144,524.87	3,020.24	3,038.57	6,058.81
Cubic Foot Measure							
Sawlogs							
Balsam	5,843		26,548.01	26,548.01	437.99	818.94	1,256.93
Birch, white	8,178		46,231.19	46,231.19	277.00	790.62	1,067.62
Cedar	6		72.77	72.77	1.20	.52	1.72
Pine, jack	266,333		1,268,288.72	1,268,288.72	29,833.48	7,845.28	37,678.76
Pine, red	449		4,138.95	4,138.95	136.59	153.14	289.73
Pine, white	1,475		15,041.32	15,041.32	496.36	556.54	1,052.90
Poplar	22,648		112,311.24	112,311.24	672.75	1,694.81	2,367.56
Spruce	235,113		719,392.58	719,392.58	23,706.80	7,050.32	30,757.12
Total sawlogs	540,045		2,192,024.78	2,192,024.78	55,562.17	18,910.17	74,472.34
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Pine, white	1		10.91	10.91	.44	.22	.66
Spruce	820		24,735.60	24,735.60	1,232.86	162.32	1,395.18
Piling							
Poplar	32		1,033.56	1,033.56	58.07	20.67	78.74
Spruce	738		18,394.29	18,394.29	979.23	150.77	1,130.00
Poles							
Cedar	42		495.54	495.54	18.53	9.90	28.43
Pine, jack	11,876		210,247.55	210,247.55	9,656.12	2,114.11	11,770.23
Pine, white	6		145.72	145.72	7.67	3.79	11.46
Spruce	6		132.96	132.96	6.65	1.32	7.97
Total boom timber, piling, poles	13,521		255,196.13	255,196.13	11,959.57	2,463.10	14,422.67
Total cubic foot measure	553,566		2,447,220.91	2,447,220.91	67,521.74	21,373.27	88,895.01

Cordage

Pulpwood

Balsam	36,826.34	(	3,130,238.90	51,556.86	17,294.29	68,851.15
Balsam (export levy)	246.01	)	( 20,910.85)		246.01	246.01
Birch, white	3,139.16		266,828.60	1,569.58	717.97	2,287.55
Cedar	24.30		2,065.50	34.02	10.18	44.20
Pine, jack	35,890.96		3,050,731.60	71,781.92	4,426.41	76,208.33
Pine, red	8.00		680.00	11.20		11.20
Pine, white	11.00		935.00	15.40		15.40
Poplar	18,890.19		1,605,666.15	9,445.11	11,612.25	21,057.36
Spruce	266,873.49		22,684,246.65	747,245.78	115,068.25	862,314.03
Spruce (export levy)	(1,262.01)	(	( 107,270.85)		1,262.01	1,262.01
Tamarack	142.45		12,108.25	199.43	36.64	236.07
Total pulpwood	361,805.89		30,753,500.65	881,859.30	150,674.01	1,032,533.31

Fuelwood

Hardwood	531.37		45,166.45	265.69	252.98	518.67
Total fuelwood	531.37		45,166.45	265.69	252.98	518.67

Bolts

Birch, white	163.28		13,878.80	81.64	408.20	489.84
Poplar	122.51		10,413.35	61.26		61.26
Total bolts	285.79		24,292.15	142.90	408.20	551.10
Total cordage	362,623.05		30,822,959.25	882,267.89	151,335.19	1,033,603.08

Miscellaneous

Posts — lin. ft.						
Cedar	1,453	11,624	5,812.00	116.24	27.32	143.56
Car-Stakes — cu. ft.						
Spruce	773	1,019.78	1,019.78	33.60	7.20	40.80
Tie-Blocks — cu. ft.						
Pine, jack	23,747	134,962.20	134,962.20	3,175.58	158.78	3,334.36
Christmas trees	50		25.00	5.00		5.00
Total miscellaneous	26,023		141,818.98	3,330.42	193.30	3,523.72
Total Ontario scale	19,550	773,208	144,524.87	3,020.24	3,038.57	6,058.81
Total cubic foot measure	553,566	2,447,220.91	2,447,220.91	67,521.74	21,373.27	88,895.01
Total cordage	362,623.05		30,822,959.25	882,267.89	151,335.19	1,033,603.08
Grand total	599,139		33,556,524.01	956,140.29	175,940.33	1,132,080.62

Number of permits issued and included in above —

Conversion factor — Ontario scale to cubic foot measure —

Conversion factor — cordage to cubic foot measure —

82,423.13

377

5.35

85

SAULT STE. MARIE

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Ash	63		5,937	1,109.72	29.70	24.37	54.07
Balsam	195		4,715	881.31	18.85	49.27	68.12
Basswood	9		658	122.99	3.29	1.97	5.26
Birch, white	5,787		383,265	71,638.31	574.90	1,453.07	2,027.97
Birch, yellow	142,653		12,580,329	2,351,556.82	62,904.19	125,071.15	187,975.34
Cedar	104		1,519	283.93	4.56	3.57	8.13
Elm	177		20,822	3,854.58	108.12	51.05	154.17
Hemlock	5,858		649,390	121,381.31	1,948.14	1,216.37	3,164.51
Maple	67,152		5,430,222	1,014,994.77	27,151.17	17,308.03	44,459.20
Oak	4,082		424,214	79,292.34	2,121.10	1,632.76	3,753.86
Pine, jack	1,375		91,296	17,064.67	365.18	182.59	547.77
Pine, red	54,014		5,125,641	958,063.74	25,628.22	19,848.44	45,476.66
Pine, white	259,820		30,171,419	5,639,517.57	150,857.15	109,983.48	260,840.63
Poplar	109		7,194	1,344.67	10.79	14.89	25.68
Spruce	19,390		1,329,746	248,550.65	5,318.99	4,220.21	9,539.20
Total Ontario scale	560,788		56,226,667	10,509,657.38	277,039.35	281,061.22	558,100.57
Cubic Foot Measure							
Sawlogs							
Balsam	53		100.05	100.05	1.65	7.35	9.00
Cedar	112		954.60	954.60	15.75	31.98	47.73
Hemlock	2		29.81	29.81	.49	1.00	1.49
Spruce	214		972.00	972.00	32.08	55.40	87.48
Total sawlogs	381		2,056.46	2,056.46	49.97	95.73	145.70
Boom Timber, Piling, Poles Boom and Dimension Timber							
Cedar	40		1,112.02	1,112.02	61.56		61.56
Pine, red	4		212.49	212.49	12.75		12.75
Pine, white	57		3,193.40	3,193.40	191.60		191.60
Spruce	304		6,145.49	6,145.49	292.69	23.38	316.07

Poles									
Pine, red	4	142.23	142.23	8.30	1.43	9.73			
Pine, white	1	50.15	50.15	3.01	1.00	4.01			
Total boom timber, piling, poles	410	10,855.78	10,855.78	569.91	25.81	595.72			
Total cubic foot measure	791	12,912.24	12,912.24	619.88	121.54	741.42			
Cordage									
Pulpwood									
Balsam		3,006.92	255,588.20	4,209.68	511.08	4,720.76			
Birch, white		348.44	29,617.40	174.23	346.68	520.91			
Pine, jack		47.00	3,995.00	94.00	11.75	105.75			
Pine, red		190.73	16,212.05	267.02	1,354.19	1,621.21			
Poplar		547.97	46,577.45	273.99	538.33	812.32			
Spruce		6,167.77	524,260.45	17,269.76	2,086.77	19,356.53			
Total pulpwood		10,308.83	876,250.55	22,288.68	4,848.80	27,137.48			
Fuelwood									
Hardwood		613.00	52,105.00	306.50	306.50	613.00			
Total fuelwood		613.00	52,105.00	306.50	306.50	613.00			
Total cordage		10,921.83	928,355.55	22,595.18	5,155.30	27,750.48			
Miscellaneous									
Posts — lin. ft.									
Cedar	141	1,238	619.00	12.38	12.38	24.76			
Pine, red	283	2,264	1,132.00	22.64	118.86	141.50			
Total miscellaneous	424	3,502	1,751.00	35.02	131.24	166.26			
Total Ontario scale	560,788	56,226,667	10,509,657.38	277,039.35	281,061.22	558,100.57			
Total cubic foot measure	791	12,912.24	12,912.24	619.88	121.54	741.42			
Total cordage		10,921.83	928,355.55	22,595.18	5,155.30	27,750.48			
Grand total	562,003	10,921.83	11,452,676.17	300,289.43	286,469.30	586,758.73			
Number of permits issued and included in above —				127		8,184.60			
Conversion factor — Ontario scale to cubic foot measure —				5.35					
Conversion factor — cordage to cubic foot measure —				85					

SIOUX LOOKOUT

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues \$	Bonus \$	Stumpage Value \$
Board Foot Measure							
Ontario Scale							
Balsam	7,116		195,572	36,555.51	782.29	391.15	1,173.44
Pine, jack	109,902		3,020,930	564,659.81	12,083.72	4,913.42	16,997.14
Spruce	351,042		8,036,087	1,502,072.34	32,144.35	15,285.81	47,430.16
Total Ontario scale	468,060		11,252,589	2,103,287.66	45,010.36	20,590.38	65,600.74
Cubic Foot Measure							
Sawlogs							
Pine, jack	38,020		223,220.73	223,220.73	5,246.00	1,393.90	6,639.90
Pine, red	437		7,001.06	7,001.06	231.03	119.02	350.05
Pine, white	5		26.13	26.13	.86	.44	1.30
Poplar	804		6,583.47	6,583.47	39.50		39.50
Spruce	38,465		257,876.23	257,876.23	8,509.92	1,805.13	10,315.05
Total sawlogs	77,731		494,707.62	494,707.62	14,027.31	3,318.49	17,345.80
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Pine, red	169		6,574.61	6,574.61	380.10		380.10
Pine, white	6		261.20	261.20	15.38		15.38
Spruce	235		6,330.94	6,330.94	321.02	57.32	378.34
Poles							
Pine, jack	12,249		190,321.30	190,321.30	8,190.54		8,190.54
Spruce	325		2,878.28	2,878.28	97.40		97.40
Total boom timber, piling, poles	12,984		206,366.33	206,366.33	9,004.44	57.32	9,061.76
Total cubic foot measure	90,715		701,073.95	701,073.95	23,031.75	3,375.81	26,407.56

Cordage

Pulpwood							
Balsam	438.81	37,298.85	614.33	241.59	855.92		
Pine, jack	59,190.56	5,031,197.60	118,381.12	8,257.97	126,639.09		
Spruce	108,350.77	9,209,815.45	292,678.87	14,589.81	307,268.68		
Spruce (export levy)	(5,221.12)	(443,795.20)		5,221.12	5,221.12		
Total pulpwood	167,980.14	14,278,311.90	411,674.32	28,310.49	439,984.81		
Fuelwood							
Hardwood	1,198.87	101,903.95	599.43		599.43		
Softwood	3,803.27	323,277.95	1,901.64	795.00	2,696.64		
Total fuelwood	5,002.14	425,181.90	2,501.07	795.00	3,296.07		
Total cordage	172,982.28	14,703,493.80	414,175.39	29,105.49	443,280.88		

Miscellaneous

Posts — lin. ft.	293	2,344	1,172.00	23.44	23.44
Cedar					
Mining Timber — cu. ft.					
Spruce	18,440	2,940.20	2,940.20	1,403.53	1,403.53
Tie-Blocks — cu. ft.					
Pine, jack	11,575	56,467.15	56,467.15	1,328.64	1,395.07
Total miscellaneous	30,308	—	60,579.35	2,755.61	2,822.04
Total Ontario scale	468,060	11,252,589	2,103,287.66	45,010.36	65,600.74
Total cubic foot measure	90,715	701,073.95	701,073.95	23,031.75	26,407.56
Total cordage		172,982.28	14,703,493.80	414,175.39	443,280.88
Grand total	589,083	172,982.28	17,568,434.76	484,973.11	538,111.22

Number of permits issued and included in above—
Conversion factor—Ontario scale to cubic foot measure—
Conversion factor—cordage to cubic foot measure—

SUDBURY

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues \$	Bonus \$	Stumpage Value \$
Board Foot Measure							
Ontario Scale							
Ash	22		1,883	351.96	9.42	5.95	15.37
Birch, white	5,585		337,342	63,054.58	506.01	1,213.46	1,719.47
Birch, yellow	5,861		545,119	101,891.40	2,725.61	10,494.50	13,220.11
Cedar	313		8,225	1,537.38	24.67	23.31	47.98
Elm	3		197	36.82	.99	.20	1.19
Hemlock	4,668		151,051	28,233.83	453.15	467.49	920.64
Maple	1,168		100,701	18,822.62	503.52	1,018.31	1,521.83
Oak	17		1,626	303.93	8.13	4.61	12.74
Pine, jack	997		26,069	4,872.71	104.28	41.28	145.56
Pine, red	27,252		2,000,634	373,950.28	10,003.19	6,867.16	16,870.35
Pine, white	39,348		3,549,694	663,494.21	17,748.48	16,864.73	34,613.21
Spruce	4,809		231,553	43,280.94	926.21	702.40	1,628.61
Total Ontario scale	90,043		6,954,094	1,239,830.66	33,013.66	37,703.40	70,717.06
Cubic Foot Measure							
Sawlogs							
Balsam	1,170		5,981.19	5,981.19	98.69	56.50	155.19
Birch, white	17		89.49	89.49	.54		.54
Pine, jack	100,543		524,000.19	524,000.19	12,314.01	1,034.23	13,348.24
Pine, red	37,959		251,882.71	251,882.71	8,312.11	4,744.67	13,056.78
Pine, white	49,951		574,007.36	574,007.36	18,942.25	21,324.39	40,266.64
Poplar	575		3,371.99	3,371.99	20.24		40.28
Spruce	32,219		212,877.98	212,877.98	7,024.98	750.15	7,775.13
Total sawlogs	222,434		1,572,210.91	1,572,210.91	46,712.82	27,929.98	74,642.80
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Pine, red	38		983.28	983.28	51.40	9.83	61.23
Pine, white	13		566.87	566.87	32.97	5.67	38.64
Spruce	47		1,482.83	1,482.83	82.20	14.83	97.03
Poles							
Cedar	203		2,244.25	2,244.25	89.03	89.07	178.10
Pine, jack	181		1,419.71	1,419.71	51.15	40.74	91.89

Pine, red	60	1,612.06	82.62	25.64	108.26
Pine, white	8	257.30	14.87	3.47	17.84
Spruce	466	5,244.82	248.01	154.38	402.39
Total boom timber, piling, poles	1,016	13,811.12	651.75	343.63	995.38
Total cubic foot measure	223,450	1,586,022.03	47,364.57	28,273.61	75,638.18

Cordage

Pulpwood					
Ash	3.00	255.00	1.50	1.50	3.00
Balsam	1,116.47	94,899.95	1,563.06	1,004.08	2,567.14
Birch, white	657.80	55,913.00	328.92	370.27	699.19
Elm	4.26	362.10	2.13	2.13	4.26
Maple	176.00	14,960.00	88.00	44.00	132.00
Pine, jack	27,301.92	2,320,663.20	54,603.84	197.47	54,801.31
Pine, red	249.30	21,190.50	349.02	510.12	859.14
Pine, white	1,268.23	107,799.55	1,775.52	2,622.70	4,398.22
Poplar	5,085.11	432,234.35	2,542.57	2,607.05	5,149.62
Spruce	9,640.53	819,445.05	26,993.49	719.84	27,713.33
Total pulpwood	45,502.62	3,867,722.70	88,248.05	8,079.16	96,327.21

Fuelwood					
Hardwood	1,970.63	167,503.55	985.32	29.81	1,015.13
Softwood	143.00	12,155.00	71.50	27.00	98.50
Total fuelwood	2,113.63	179,658.55	1,056.82	56.81	1,113.63
Total cordage	47,616.25	4,047,381.25	89,304.87	8,135.97	97,440.84

Miscellaneous

Posts — lin. ft.					
Cedar	2,663	21,304	213.04	325.73	538.77
Poplar	15	120	1.20	1.20	1.20
Spruce	135	1,080	10.80	9.60	20.40
Total miscellaneous	2,813	22,504	225.04	335.33	560.37
Total Ontario scale	90,043	6,954,094	1,299,830.66	37,703.40	70,717.06
Total cubic foot measure	223,450	1,586,022.03	1,586,022.03	28,273.61	75,638.18
Total cordage		47,616.25	4,047,381.25	89,304.87	97,440.84
Grand total	316,306	—	6,944,485.94	74,448.31	244,356.45

Number of permits issued and included in above — 342
 Conversion factor — Ontario scale to cubic foot measure — 5.35
 Conversion factor — cordage to cubic foot measure — 85

SWASTIKA

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Birch, white	523		23,659	4,422.24	35.49	2.96	38.45
Birch, yellow	348		18,755	3,505.61	93.78		93.78
Pine, jack	511,575		13,491,827	2,521,836.82	53,967.30	35,670.56	89,637.86
Pine, red	5,827		360,774	67,434.39	1,803.88	1,933.44	3,737.32
Pine, white	29,018		2,904,477	542,892.90	14,522.39	15,735.27	30,257.66
Poplar	65,951		2,323,744	434,344.67	3,485.63	1,422.62	4,908.25
Spruce	316,588		8,403,638	1,570,773.46	33,614.54	21,066.02	54,680.56
Tamarack	26		921	172.15	2.76	6.44	9.20
Total Ontario scale	929,856		27,527,795	5,145,382.24	107,525.77	75,837.31	183,363.98
Cubic Foot Measure							
Sawlogs							
Balsam	3		50.63	50.63	.84	2.20	3.04
Birch, white	4,523		29,531.77	23,531.77	177.19	236.26	413.45
Pine, jack	341,584		1,754,201.70	1,754,201.70	41,223.76	51,598.94	92,822.70
Poplar	48,067		360,111.61	360,111.61	2,160.66	4,193.66	6,354.32
Spruce	96,882		463,913.91	463,913.91	15,309.16	10,069.30	25,378.46
Total sawlogs	491,059		2,607,809.62	2,607,809.62	58,871.61	66,100.36	124,971.97
Boom Timber, Piling, Poles							
Poles							
Pine, jack	846		14,483.61	14,483.61	634.10	446.19	1,080.29
Spruce	121		2,767.53	2,767.53	136.14	30.73	166.87
Total boom timber, piling, poles	967		17,251.14	17,251.14	770.24	476.92	1,247.16
Total cubic foot measure	492,026		2,625,060.76	2,625,060.76	59,641.85	66,577.28	126,219.13

Cordage

Pulpwood					
Balsam	5,888.49	500,521.65	8,243.89	2,487.34	10,731.23
Birch, white	1,744.30	148,265.50	872.16	668.28	1,540.44
Pine, jack	330.64	28,104.40	661.28	11.88	673.16
Poplar	6,848.18	582,095.30	3,424.14	2,816.99	6,241.13
Spruce	35,643.05	3,029,659.25	99,800.52	19,870.91	119,671.43
Tamarack	76.46	6,499.10	107.05	45.87	152.92
Total cordage	50,531.12	4,295,145.20	113,109.04	25,901.27	139,010.31

Fuelwood					
Hardwood	1,263.02	107,356.70	631.51		631.51
Softwood	331.32	28,162.20	165.66		165.66
Total fuelwood	1,594.34	135,518.90	797.17		797.17

Bolts					
Birch, white	189.97	16,147.45	95.00	95.00	190.00
Poplar	5,927.05	503,799.25	2,963.54	3,484.80	6,448.34
Total bolts	6,117.02	519,946.70	3,058.54	3,579.80	6,638.34
Total cordage	58,242.48	4,950,610.80	116,964.75	29,481.07	146,445.82

Miscellaneous

Posts — lin. ft.					
Cedar	4,606	35,376	353.76		353.76
Pine, jack	24	192	1.92		1.92
Mining Timber — cu. ft.					
Spruce	41,538	61,302.85	2,019.39	263.31	2,282.70
Total miscellaneous	46,168	—	2,375.07	263.31	2,638.38
Total Ontario scale	929,856	27,527,795	107,525.77	75,837.31	183,363.08
Total cubic foot measure	492,026	2,625,060.76	59,641.85	66,577.28	126,219.13
Total cordage		58,242.48	116,964.75	29,481.07	146,445.82
Grand total	1,468,050	—	286,507.44	172,158.97	458,666.41

Number of permits issued and included in above — 344
Conversion factor — Ontario scale to cubic foot measure — 5.35
Conversion factor — cordage to cubic foot measure — 85

TWEED

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Stumpage Value
Board Foot Measure							
Ontario Scale							
Ash	1,669		72,180	13,491.59	\$ 360.94	\$ 199.33	\$ 560.27
Balsam	15,225		307,249	57,429.72	1,228.99	2,057.52	3,286.51
Basswood	17,214		899,645	168,157.94	4,498.26	6,726.18	11,224.44
Beech	5,453		286,873	53,621.12	430.34	1,176.89	1,607.23
Birch, white	10,745		365,553	68,327.66	548.28	1,714.95	2,263.23
Birch, yellow	5,512		323,492	60,465.79	1,617.54	3,066.53	4,684.07
Butternut	153		11,955	2,234.58	17.94	73.21	91.15
Cedar	6,443		158,400	29,607.48	475.23	744.22	1,219.45
Cherry	102		4,016	750.65	20.11	33.50	33.50
Elm	2,605		218,297	40,803.18	1,091.52	632.82	1,724.34
Hemlock	15,540		757,542	141,596.54	2,272.64	2,912.26	5,184.90
Maple	42,448		2,790,021	521,499.25	13,950.17	12,636.44	26,586.61
Oak	6,737		333,764	62,385.79	1,688.89	1,389.88	3,058.77
Pine, red	20,858		734,251	137,243.18	3,671.32	4,815.89	8,487.21
Pine, white	85,466		5,090,579	951,510.09	25,452.96	38,569.42	64,022.38
Poplar	65,884		2,337,149	436,850.28	3,505.74	7,929.04	11,434.78
Spruce	36,190		1,594,208	297,982.80	6,376.88	11,491.55	17,868.43
Tamarack	179		6,071	1,134.77	18.21	15.02	33.23
Total Ontario scale	338,423		16,291,245	3,045,092.51	67,205.96	96,164.54	163,370.50

Cubic Foot Measure							
Sawlogs							
Basswood	12		238.02	283.02	6.19	43.41	49.60
Birch, white	12		222.30	222.30	1.78	6.22	8.00
Birch, yellow	12		368.56	368.56	10.69	25.95	36.64
Maple	4		89.35	89.35	2.59	4.11	6.70
Pine, red	1		16.79	16.79	.50	1.15	1.65
Pine, white	6		246.71	246.71	8.14	13.57	21.71
Poplar	73		834.13	834.13	5.00	15.06	20.06
Spruce	2,094		3,910.12	3,910.12	129.03	7.82	136.85
Tamarack	70		156.68	156.68	2.51	2.97	5.48
Total sawlogs	2,284		6,082.66	6,082.66	166.43	120.26	286.69
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Balsam	04		39.45	39.45	1.40	.40	1.80

Spruce	98	1,047.28	1,047.28	37.98	10.47	48.45
Poles						
Cedar	46	442.26	442.26	15.74	5.24	20.98
Hemlock	422	8,775.21	8,775.21	418.37	105.97	524.34
Pine, red	552	18,219.24	18,219.24	1,027.22	192.26	1,219.48
Total boom timber, piling, poles	1,122	28,523.44	28,523.44	1,500.71	314.34	1,815.05
Total cubic foot measure	3,406	34,606.10	34,606.10	1,667.14	434.60	2,101.74
Cordage						
Pulpwood						
Ash	139.98		11,898.30	69.99	35.70	105.69
Balsam	987.35		83,324.75	1,382.28	496.39	1,878.67
Basswood	33.06		2,810.10	16.53	8.97	25.50
Beech	763.91		64,932.35	381.96	221.89	603.85
Birch, white	1,879.15		159,727.75	939.58	424.26	1,363.84
Elm	213.30		18,130.50	106.65	43.47	150.12
Maple	1,876.45		159,498.25	938.24	442.46	1,380.70
Oak	115.89		9,850.65	57.94	26.73	84.67
Pine, white	11.98		1,018.30	16.78	.26	17.04
Poplar	9,838.29		836,254.65	4,919.17	2,500.95	7,420.12
Spruce	80.09		6,807.65	224.25	16.62	240.87
Total pulpwood	15,939.45		1,354,853.25	9,053.37	4,217.70	13,271.07
Fuelwood						
Hardwood	514.39		43,723.15	257.21	33.88	291.09
Softwood	13.00		1,105.00	6.50		6.50
Total fuelwood	527.39		44,828.15	263.71	33.88	297.59
Total cordage	16,466.84		1,399,681.40	9,317.08	4,251.58	13,568.66
Miscellaneous						
Posts — lin. ft.						
Cedar	4,645	32,424	16,212.00	324.24	213.25	537.49
Mining Timber — cu. ft.						
Spruce	2,053	5,477.20	5,477.20	180.77	21.86	202.63
Tamarack	256	715.42	715.42	22.63		22.63
Total miscellaneous	6,954	—	22,404.62	527.64	235.11	762.75
Total Ontario scale	338,423	16,291.245	3,045,092.51	67,205.96	96,164.54	163,370.50
Total cubic foot measure	3,406	34,606.10	34,606.10	1,667.14	434.60	2,101.74
Total cordage			1,399,681.40	9,317.08	4,251.58	13,568.66
Grand total	348,783	—	4,501,784.63	78,717.82	101,085.83	179,803.65
Number of permits issued and included in above —						
Conversion factor — Ontario scale to cubic foot measure —				174	5.35	53,291.54
Conversion factor — cordage to cubic foot measure —					85	

WHITE RIVER

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1, 1961, TO MARCH 31, 1962

Species	Pieces	Cords	Feet	Equivalent In Cu. Ft.	Dues	Bonus	Stumpage Value
Cubic Foot Measure							
Sawlogs					\$	\$	\$
Birch, white	1,734		16,355.72	16,355.72	98.14	390.36	488.50
Pine, jack	170,971		2,041,631.01	2,041,631.01	47,978.33	33,150.68	81,129.01
Spruce	29,988		324,512.08	324,512.08	10,708.90	5,516.70	16,225.60
Total sawlogs	202,693		2,382,498.81	2,382,498.81	58,785.37	39,057.74	97,843.11
Boom Timber, Piling, Poles							
Poles							
Pine, jack	194		2,187.27	2,187.27	90.37		90.37
Total boom timber, piling, poles	194		2,187.27	2,187.27	90.37		90.37
Total cubic foot measure	202,887		2,384,686.08	2,384,686.08	58,875.74	39,057.74	97,933.48
Cordage							
Pulpwood							
Balsam		6,646.84		564,981.40	9,305.57	1,776.11	11,081.68
Birch, white		834.93		28,469.05	170.82	1,537.33	1,708.15

Pine, jack	35,694.53	3,034,035.05	71,389.06	3,884.19	75,273.25
Spruce	91,572.33	7,783,648.05	256,403.06	26,908.46	283,311.52
Total pulpwood	134,248.63	11,411,133.55	337,268.51	34,106.09	371,374.60
Fuelwood					
Hardwood	110.00	9,350.00	55.00	55.00	110.00
Softwood	105.00	8,925.00	52.50	53.50	106.00
Total fuelwood	215.00	18,275.00	107.50	108.50	216.00
Total cordage	134,463.63	11,429,408.55	337,376.01	34,214.59	371,590.60
Miscellaneous					
Posts — lin. ft.					
Pine, jack	651	7,758	77.58	67.50	145.08
Spruce	456	5,332	53.32	53.32	106.64
Mining Timber — cu. ft.					
Spruce	2,347	4,031.85	133.05	108.86	241.91
Christmas trees	450	225.00	67.50	67.50	67.50
Total miscellaneous	3,904	—	331.45	229.68	561.13
Total cubic foot measure	202,887	2,384,686.08	58,875.74	39,057.74	97,933.48
Total cordage	134,463.63	11,429,408.55	337,376.01	34,214.59	371,590.60
Grand total	206,791	13,824,896.48	396,583.20	73,502.01	470,085.21

Number of permits issued and included in above — 51

Conversion factor — cordage to cubic foot measure — 85

3,424.27

NOTES

